ISATT 2013 CONFERENCE
Excellence of teachers? Practice, policy, research

July 1-5, 2013

Department of Educational Studies
Faculty of Psychology and Educational Sciences
Ghent University
WIFI
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CONFERENCE SECRETARIAT
Location: Room 120.017 (2nd floor)
Email: isatt2013@ugent.be
Phone: 0032 476 62 17 10

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Location: Main entrance
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WELCOME TO THE ISATT 2013 CONFERENCE

The theme of the 16th Biennial Conference on Teachers and Teaching is *Excellence of teachers? Practice, policy, research*, as the excellence of teachers and the quality of teacher education are at the forefront of policy and practice related discussions. The conference theme is especially supported by a number of invited keynote speakers, who we hope you will find inspiring. Welcoming participants from 38 different countries, over various continents the ISATT 2013 Conference offers an excellent platform for generating new visions and insights related to practice, policy and research on teachers and teacher education.

This 16th edition of the ISATT conference is also a special edition as we celebrate ISATT's 30th anniversary. We hope you will take part in our full and varied social programme and enjoy the beauty of the medieval city centre of Ghent.

On behalf of the Scientific and Organising Committee we cordially welcome you to the ISATT 2013 Conference at Ghent University!

Antonia Aelterman
Chair of the Scientific and Organising Committee of ISATT 2013
## ISATT 2013 CONFERENCE ORGANISATION

### Local organising committee

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<tr>
<td>Isabel Rots</td>
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<tr>
<td>Jessie De Naeghel</td>
<td>Conference coordinator</td>
<td>Ghent University, Belgium</td>
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<tr>
<td>Jeroen Bourgonjon</td>
<td>Webmaster</td>
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<td>Lieselot Declercq</td>
<td></td>
<td>Ghent University, Belgium</td>
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<tr>
<td>Geert Kelchtermans</td>
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<td>Kris Rutten</td>
<td></td>
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<tr>
<td>Ilse Ruys</td>
<td></td>
<td>Artevelde University College, Belgium</td>
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<tr>
<td>Katrien Struyven</td>
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<td>Vrije Universiteit Brussels, Belgium</td>
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<td>Melissa Tuytens</td>
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<tr>
<td>Ruben Vanderlinde</td>
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<tr>
<td>Michiel Voet</td>
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### Scientific committee

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<tr>
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<td>Jeroen Bourgonjon</td>
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<tr>
<td>Perry Den Brok</td>
<td></td>
<td>Eindhoven University of Technology, The Netherlands</td>
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<tr>
<td>Geert Devos</td>
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<tr>
<td>Nadine Engels</td>
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<td>Vrije Universiteit Brussels, Belgium</td>
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<td>Geert Kelchtermans</td>
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<td>KU Leuven, Belgium</td>
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<tr>
<td>Mieke Lunenberg</td>
<td></td>
<td>VU University Amsterdam, The Netherlands</td>
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<tr>
<td>André Mottart</td>
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<td>Kris Rutten</td>
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<tr>
<td>Tammy Schellens</td>
<td></td>
<td>Ghent University, Belgium</td>
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<tr>
<td>Kari Smith</td>
<td></td>
<td>University of Bergen, Norway</td>
</tr>
<tr>
<td>Ronald Soetaert</td>
<td></td>
<td>Ghent University, Belgium</td>
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<tr>
<td>Elke Struyf</td>
<td></td>
<td>University of Antwerp, Belgium</td>
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<tr>
<td>Katrien Struyven</td>
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<td>Melissa Tuytens</td>
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<td>Martin Valcke</td>
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<tr>
<td>Ruben Vanderlinde</td>
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<td>Ghent University, Belgium</td>
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CONFERENCE INFORMATION

Coffee breaks and lunches

There will be regular tea and coffee breaks throughout each day of the conference. Sandwich lunch on Tuesday (for pre-conference participants only), Wednesday and Thursday is included in the registration fee. Tea/coffee and lunches will be served in the hallway on the second floor. Please check the programme overview within this book for the specific timing.

Internet access and use of computers

There will be wireless internet access at the conference venue

- Network: UGentGuest
- Login: guestIsatt
- Password: O5Gnthmw

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Follow us on twitter at @ISATT2013

There is a computer room available on the first floor with access to the internet. To login use the button “anonymous”.

- User: UGentGuest
- Password: /

Printing and photocopying facilities

To print or copy a print/copy card is needed. You can buy a print/copy card at the vending machine in the entrance hall. This card costs € 2.00. Don’t forget to charge your card at the vending machine (copying or printing costs € 0.04 per page in black and white, € 0.20 per page in colour).

To print:

- Print from a PC in the computer room
- Slide the card in the printer
- Choose printing and select your document from the list on the display

To copy:

- Slide the card in the printer
- Choose copying
Book exhibition

The book exhibition will take place on the second floor in room 2A (see plan page 7). Discounted rates will be offered to ISATT members and conference participants!

J. Story-Scientia, a local scientific bookseller, is happy to offer a selection of books from different outstanding publishers related to the conference theme Excellence of teachers? Practice, policy, research.

- Springer Verlag
- Oxford University Press
- Sage Publications
- Cambridge University Press
- Macmillan Publishing
- Academia Press
- Willey & Blackwell Publishers
- Jessica Kingsley
- Taylor & Francis, inc. Routledge etc.

Sense Publishers, a fast growing publisher of books in educational research and related fields, will display their work as well.

Social events

On Tuesday evening, July 2, all conference participants are invited to attend the conference opening reception, which will be held from 18.30 – 20.00 at the University Forum (Sint-Pietersnieuwstraat 33, see Getting around page 11-12).

The conference dinner takes place on Wednesday evening, July 3 from 19.30 – 23.00 at the Flanders Opera house (Schouwburgstraat 3, see Getting around page 11-12) in the city centre of Ghent.

Optional tours are organised on Thursday afternoon, July 4. To register for the optional tours please turn to the Conference secretariat on the second flour (room 120.017) for more information (tickets will be sold according to availability).

- Option 1: Bicycle tour + brewery visit
  Be present at the main entrance of the conference venue at 13.00
- Option 2: Ghent city museum + boat trip
  Be present at the main entrance of the conference venue at 13.45
- Option 3: Castle of the counts + Prinsenhof quarter
  Be present at the cashpoint of the Castle of the counts (Sint-Veerleplein 11) at 13.45
- Option 4: Nibbling through Ghent (walking tour)
  Be present at the statue on the Sint-Veerleplein at 13.45
- Option 5: Boat tour + Guided city walk and brewery visit
Be present at the **Graslei on the landing stage of Gent-Watertoerist** at 14.15

More information about our social programme is available on our website, see www.isatt2013.ugent.be/socialprogramme.php.

**Restaurants and bars**

A recurrent question during conferences is: "What are authentic places to have dinner or drinks?". Therefore, the local staff of the Department of Educational Studies has created a list with all of their favourite restaurants and bars. A selection of this list is presented in appendix. The complete list is available online, see http://www.isatt2013.ugent.be/food.php and http://www.isatt2013.ugent.be/drinks.php.

**Getting around (taxis, walking distance and public transport)**

**Taxis** in Ghent are safe and affordable. For a taxi service (V-Tax) call 00329 222 22 22.

<table>
<thead>
<tr>
<th>Conference venue (Henri Dunantlaan 2) to University Forum (Opening reception, Sint-Pietersnieuwstraat 33)</th>
<th>Walking distance</th>
<th>Public transport</th>
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</thead>
<tbody>
<tr>
<td>2 km – 26 minutes (see map 1)</td>
<td>Bus 9 (direction: Gentbrugge Groeningewijk) + bus 6 (direction: Mariakerke Post) Stop near conference venue: Gent Beneluxplein (bus 9) Transfer at: Stop Gent Neermeerskaai Take bus 6 (direction: Mariakerke Post) Stop near University Forum: Gent Bagattenstraat Duration: 20 minutes (see map 1)</td>
<td></td>
</tr>
</tbody>
</table>

| Conference venue (Henri Dunantlaan 2) to Flanders Opera house (Conference dinner, Schouwburgstraat 3) | 1,6 km – 21 minutes (see map 2) | Tram – line 4 (direction Gentbrugge Moscou) + line 1 (direction Flanders Expo) Stop near conference venue: Bernard Spaelaan (line 4) Transfer at: Stop Gent Rabot Take tram line 1 (direction Flanders Expo) Stop near Opera: Gent Zonnestraat Duration: about 20 minutes (see map 2) |
## PROGRAMME OVERVIEW PRECONFERENCE

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<td></td>
<td>Pre-conference opening – Room 1B</td>
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<td>13.30 - 15.00</td>
<td></td>
<td>Workshop 1: Amanda Berry – Room 1B</td>
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<tr>
<td>15.00 - 15.30</td>
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<td>Coffee break</td>
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<td>15.30 - 17.00</td>
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<td>Pre-conference social event</td>
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<td>Parallel discussion sessions</td>
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<td>Coffee break</td>
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<td>12.30 - 13.30</td>
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<td>Pre-conference closing – room 1B + Lunch</td>
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<tr>
<td>08.30 - ...</td>
<td></td>
<td>Registration &amp; information</td>
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<tr>
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<td></td>
<td>Main conference opening – Auditorium 2 (2nd floor)</td>
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<td>14.00 - 15.00</td>
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<td>Keynote 1: Diane Mayer – Auditorium 2 (2nd floor)</td>
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<td>15.00 - 15.30</td>
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<td>Coffee break</td>
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<td>(15.00 - 17.00) – Meeting room 120.047 (2nd floor)</td>
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<th>Time</th>
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<tr>
<td>14.45 - 15.45</td>
<td>Keynote 3: Amanda Berry – Auditorium 2 (2nd floor)</td>
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<td>Parallel sessions D</td>
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<td>17.45 - 18.45</td>
<td><em>ISATT Members’ Meeting</em> – Auditorium 1 (1st floor)</td>
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<td>19.30 - 23.00</td>
<td>Conference dinner (doors: 19.00) – Flanders Opera house</td>
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<td>08.30 - ...</td>
<td>Registration &amp; information</td>
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<td>09.00 - 10.00</td>
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<td>10.45 - 11.00</td>
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<tr>
<td>11.00 - 12.30</td>
<td>Parallel sessions F</td>
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<td>12.30 - 13.30</td>
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<tr>
<td>08.30 - ...</td>
<td>Registration &amp; information</td>
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<tr>
<td>09.00 - 10.30</td>
<td>Parallel sessions G</td>
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<tr>
<td>10.30 - 11.00</td>
<td>Coffee break</td>
</tr>
<tr>
<td>11.00 - 12.00</td>
<td>Keynote 5: Freddy Mortier – Auditorium 2 (2nd floor)</td>
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<tr>
<td>12.00 - 12.30</td>
<td>Conference closing – Auditorium 2 (2nd floor)</td>
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In this talk, I will interrogate the current “policy moment” for teacher education and the reforms being driven by questions such as: What should beginning teachers know and be able to do? How can judgments be made about what beginning teachers know and are able to do? What is the value of teacher education? By focussing our practice and research on these issues, I suggest that teacher educators will be well positioned to challenge the increasing regulation and prescription of teacher education that is steadily narrowing the autonomy and professionalism of teacher educators. I will argue for research informed and practice validated professional standards for teaching at various junctures in a teaching career that capture the complexity and context-specific dimensions of quality teaching and professional judgment. In addition, I argue that we must carefully consider ways in which we can provide evidence of the quality of the teachers being prepared including authentic assessment of beginning teaching that involves consideration of teacher professional judgment and student learning. Finally, I will highlight the important work that needs to be done in teacher education research to inform and influence current policy and practice, and ensure a professionalised teacher education system in the 21st century.
Sara Dexter
The relationship between and development of classroom- and school-level conditions that support teaching for 21st century skills

Wednesday, July 3 09.00 – 10.00 | Location: Auditorium 2

Abstract
The conceptualization of 21st century skills emphasizes digital tools and digital literacy as both means and end, or medium and outcome. In this talk I will focus on specific support conditions known to address the challenges educators face when incorporating new technologies into teaching and learning. At the classroom level necessary supportive conditions include teachers’ abilities as instructional designers as well as deep pedagogical content knowledge for 21st century skills, the provision of technologies matched to the curriculum, and assessment policies that emphasize students’ development and attainment of such skills. To create these conditions school leadership practices must set forth a vision for 21st century skills and the specific data keyed to monitoring progress towards such goals, provide opportunities for teachers to develop new skills and curriculum and assessment practices, and redesign the organizational structures needed to promote and sustain the vision. In my talk I will illustrate how the lens of a “system of practice” illuminates the relationships between and development of these supports needed at the classroom and school levels. This emphasis on practice draws attention to how through shared leadership teachers and leaders can craft the necessary tools, routines, and culture that comprise this “system of practice”.

Curriculum Vitae
Dr. Sara Dexter is an associate professor of technology leadership in the Department of Leadership, Foundations, and Policy within the Curry School of Education at the University of Virginia. Her research focuses on the school-level conditions that facilitate teachers’ integration efforts, including technology support and technology leadership. She has developed case-based learning environments to develop teachers’ instructional decision making and school administrators’ leadership decision making skills, and was funded twice by the U.S. Department of Education for this work. Based on her innovative research in technology leadership, she was the 2009 recipient of the University Council for Educational Administration’s Jack A. Culbertson Award, presented annually to an outstanding junior professor of educational administration in recognition of contributions to the field. Her current grant is an IES-funded development project aimed at strengthening school leaders’ instructional leadership practice through developing teachers’ abilities to integrate technology in support of student learning. Prior to working in higher education Dr. Dexter was a junior high and high school science teacher, and district staff developer for technology integration.
Amanda Berry

Teacher educators' professional learning: "You're more or less on your own"

Wednesday, July 3 14.45 – 15.45 | Location: Auditorium 2

Abstract

Teacher educators come from various backgrounds and bring very different experiences into teacher education, yet it doesn't seem to be a career that one deliberately plans to enter. Broadly speaking, there are two main pathways into the role of teacher educator: via practice (e.g., as school teachers or administrators), or via research (e.g., as researchers with a PhD in an education related discipline). Typically, those who enter as researchers have limited experience of teaching in schools, and those who enter as practitioners have limited experience working with research. Within their institutional contexts, the work of teacher educators also differs – some are expected to carry out research as part of their role (which may or may not be directly related to teacher education), while some are expected only to teach. This diversity of backgrounds and institutional demands inevitably shapes the way in which teacher educators think about, and construct their role, and presents interesting challenges in terms of their professional learning needs.

As it appears, opportunities for professional learning are largely a matter of individual choice and personal initiative. Internationally, different responses have emerged to address the learning needs of teacher educators, however these tend to remain local. Given the varied backgrounds, needs and career pathways of teacher educators is it reasonable to look for a collective approach to teacher educator development and learning? Or is this necessarily a profession that you learn more or less on your own? Do we need PD programs? If not, what can we do to promote teacher educators' professional learning in a more sustained and systematic way?

Curriculum Vitae

Amanda Berry is an Associate Professor at ICLON, Graduate school of Teaching, The Netherlands, where she works as a teacher educator and researcher in science education and teacher education. As a former high school science and biology teacher, Amanda's transition into the role of university academic precipitated her interest in how teachers' knowledge develops and the ways in which such knowledge can be articulated, examined and shared so that it may be accessible and useful for others, and ultimately, improve the quality of students' learning. Amanda has contributed numerous publications to the fields of science education and teacher education research. She has authored and edited several books related to teachers' professional learning, including a longitudinal self-study of her practice as a science teacher educator (Berry, 2007). She is currently Editor of the journal, Studying Teacher Education; Associate Editor of the journal, Research in Science Education, and former Chair of the Self-Study of Teacher Educator Practices (S-STEP) Special Interest Group of the American Educational Research Association (2008-2010).
Abstract
If we compare school as an organization with an organism, "the heartbeat of leadership is a relationship, not a person or process" (Sergiovanni). And if we regard the learning school as a living organism, this “heartbeat” calls for resonance within the school to make the relationship between the people at different levels, planning, culture and structure in the system become visible. As a consequence educational leadership has to be shared. In the past few years, great effort has been dedicated to bringing educational leadership into closer contact with student learning. This is where the term Leadership for Learning comes into play, which requires a new understanding of leadership on all levels of the school system. It is more about next practice than best practice.
Creating a mindset for change cannot be imposed or enacted on a person; it is a human being’s innate capacity to create new knowledge. The essence of leadership builds on the capacity to feel in the here and now which future possibilities urge for evolvement without "downloading the patterns of the past" (Scharmer).

Curriculum Vitae
Dr. Michael Schratz is Professor of Education at the Department of Teacher Education and School Research, University of Innsbruck, Austria, and is presently Dean of the School of Education. He is a scientific director of the Austrian Leadership Academy. He has been involved in research projects on educational leadership and policy development and his publications have been translated into several languages. His professional interests are in educational innovation and change with a particular focus on leadership and learning, quality development and self-evaluation. He taught in Austria and Great Britain, did research at the University of California, San Diego, and worked at Deakin University (Australia). He has been a representative in international bodies (Council of Europe, European Union, ENTEP, OECD). He is presently the speaker of the German School Award by the Robert Bosch and Heidehof Foundations and president-elect of the International Congress for School Effectiveness and Improvement.
Abstract

Since about twenty years much emphasis has been laid on the teacher’s role as a moral person and on the ethical role of teachers, above of or supplementing or even constituting the core of their technical role as transmitters of knowledge and capacities. This approach, from a general point of view, is a meritorious correction on a one-sided and widely accepted view of the teacher’s role. Yet, because of its reliance both on virtue ethical concepts (the teacher having to display good character, integrity, honesty, concern for well-being of the students, etc.) and on idealist morality (the teacher having to take charge of infusing the student with values largely counteracted by the societal preferences), this approach burdens the teacher with obligations that belong to what ethicists call the supererogatory sphere, i.e. the domain of saints and heroes. Supererogatory morality should be avoided. In my lecture I will try to show, to the contrary, what a realist morality for teachers might be like, and how it could be shaped along the lines of the professional moralities of, say, lawyers and physicians, who, just like teachers, have to cope with problems of diminished autonomy in their “clients”. I will also point out the differences between these types of professionals.

Curriculum Vitae

Freddy Mortier (1958) studied philosophy at Ghent University and at the Sorbonne (Paris). He is professor of ethics at Ghent University. He is currently mainly doing research in the domain of bioethics, especially end-of-life issues and the position of minors in health care. Previously, he has published on values education and on the didactics of philosophy and ethics. He has been the dean of the Faculty of Humanities and Philosophy from 2004 to 2012 and has recently published a book on the philosophy of religion.
# DISCUSSION ROOMS

<table>
<thead>
<tr>
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<tr>
<td>Discussion room</td>
<td></td>
<td>Chair: Bob Koster</td>
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<tr>
<td><strong>Increasing professional self-understanding. Self-study research by teacher leaders</strong></td>
<td></td>
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<tr>
<td>Bob Koster and Bas van Den Berg, Interactum, The Netherlands</td>
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<tr>
<td><strong>Abstract</strong></td>
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<td>There is a growing interest in self-study used by teachers and teacher educators to improve their own practice. The focus of these self studies seems to be more on acting than on understanding, so we focus at a group of teachers who explore their professional identity. Teachers, participating in a master study, were asked to formulate critical moments in their development as teacher leader in which they experienced that their values were threatened and they were facing a dilemma connected to these threats. Then they used different self study research methods like biographies, core reflection and Socratic dialogue to dig deeper into their reports. This paper focuses on exploring what the normative dilemma’s are teacher leaders face in their daily practice and in what way their self-understanding is influenced by studying these dilemma’s. We found that the participating teachers were facing two main dilemma’s: a dilemma between competence and autonomy, and a dilemma between relatedness and competence. We also found that the effects of the self-study research is connected to a deeper understanding of how things work and that finding core values, like for example trust, connectedness or creating space, creates a break through in the two main dilemma’s found.</td>
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<th>Session number: A2</th>
<th>Location: Room 2D</th>
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<tbody>
<tr>
<td>Discussion room</td>
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<td>Chair: Stephanie Vervaet</td>
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<tr>
<td><strong>Research in teacher training. Does it matter? Why or why not?</strong></td>
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<td>Kristof Van de Keere, Stephanie Vervaet, KATHO University College, Belgium; Renaat Frans, KHLim University College, Belgium and Job De Meyere, Thomas Moore University College, Belgium</td>
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<tr>
<td><strong>Abstract</strong></td>
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<td>There is a tendency that teacher education becomes more scientific orientated and in which content and design is anchored in scientific evidence. Also the professional development of the teacher trainer is important in this matter. It seems important for the professional development of teacher trainers that research literature is available and can be used for their practice. Nevertheless, one can see that there is a problem concerning the availability of research results and materials in teacher education. If we want to embody the practice of teacher trainers as an evidence-informed practice, then this problem needs to be tackled. At this moment there are 2 projects running within the expertise center School of Education KULeuven which have as a goal the facilitation of the availability of relevant research materials in teacher education. In the project ‘P-REVIEWS’ 6 reviews on teaching methodology are written based upon a generic design plan for the writing of the reviews. The goal of these reviews is the opening up of scientific research with the focus on the use in practice, such as in teacher education. In the project ‘EDURAMA’ a web platform is being created where one can find recent research materials about specific education topics. These materials can be reviews on teaching methodology, research</td>
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digests, summaries of scientific papers, books, research projects...

In this discussion room we want to focus on what is the best way to get teaching practitioners such as teacher trainers, (student) teachers in contact with research materials and if the projects mentioned here can meet this goal. This discussion room wants to be an external feedback group in which the formula of both projects concerning the availability of research materials into teacher education is taken under consideration and where participants can give feedback and suggestions on the process and output of these both projects. In this discussion room we also want to exchange experiences concerning the use of reviews and/or web platforms as a way of exchanging research materials within teacher education in other countries in order to learn from each other.

Session number: A3  Location: Room 3A  Time: 15.30 – 17.00

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<thead>
<tr>
<th>Discussion room</th>
<th>Chair: Pablo Blasco</th>
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<tr>
<td><strong>Education through movies: Improving teaching skills and fostering reflection among students and teachers</strong></td>
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<tr>
<td>Pablo Blasco, Graziela Moreto, SOBRAMFA, Brazil; Mariluz Gonzalez Blasco, Instituto Isac Newton, Spain; Marcelo Levites and Marco Aurelio Janaudis, SOBRAMFA, Brazil</td>
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**Abstract**

Learning through aesthetics—in which cinema is included—stimulates learner reflection. Because emotions play key roles in learning attitudes and changing behavior, teachers must impact learners’ affective domain. Since feelings exist before concepts, the affective path is a critical path to the rational process of learning. Likewise, faculty use their own emotions in teaching, so learning proper methods to address their affective side is a complementary way to improve their communication with students. This workshop presents experiences of how to use cinema, with the movie clip methodology for educating emotions, among students and teachers, to foster reflection and improve teaching skills.

**SYMPOSIA**

Session number: A4  Location: Auditorium 1  Time: 15.30 – 17.00

<table>
<thead>
<tr>
<th>Symposium</th>
<th>Chair: Marie-Louise Österlind</th>
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<tr>
<td><strong>Studies of quality in school settings: A theoretical and methodological discussion</strong></td>
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<tr>
<td>Organizer(s): Marie-Louise Österlind and Charlotte Tullgren</td>
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<tr>
<td>Discussant: Charlotte Tullgren</td>
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**Abstract**

Schools are welfare institutions required to achieve and demonstrate high quality. Curricula and other national and local steering documents constitute the outer frame for the teachers work. Objectives are interpreted and implemented on local level by the teachers, who often are made responsible for the quality of the local activities. Historically conceptions of quality in schools and other human service organizations have been formulated and maintained by the professional groups working in these organisations. Quality has been closely related to the nature of the daily interactions between the professionals and the receivers of services produced in these organisations. The above implies that quality in schools is created and maintained in the daily
interactions between the teachers and the children. This implies that there are several aspects of quality which are difficult to evaluate and measure. However during the last decades there has been an increasing focus on how to measure and standardize quality and outcome in schools. This suggests that the concepts of quality in school settings need to be further explored.

**A4.1 Talk about quality - How can discourse analysis contribute to the study of quality and quality work in school? An example from a Swedish preschool setting**

Charlotte Tullgren, Marie-Louise Österlind, Lena Bäckström, Kristianstad University, Sweden and Linda Palla, Malmö University, Sweden

**Abstract**

Swedish preschools and schools are welfare institutions required to achieve and demonstrate high quality. The teachers’ extensive responsibility for quality development and evaluation is stated in the national curriculums. Many studies have contributed with quality definitions and suggestions on how quality can be achieved and measured. This paper discusses how discourse analysis can contribute to the studies of quality and quality work in school. Short extracts of data from the on-going project *Quality work in Swedish pre-school* are used in order to give an insight in the method’s potential and limitations.

Our methodological framework is inspired by Foucault’s theories of discourse and knowledge relations, in which discourses are regarded as more or less systematic statements about how we should think about the world. According to Foucault discourses shape and created meaning systems which may gain the status of ‘truth’, and hereby dominate how we define and organize ourselves and our social world. Some discourses can constrain and dissent the production of knowledge, while others may enable ‘new’ knowledge. Discourses lead to mechanisms that control us, by construing some manners of speaking [or writing] and behaving as appropriate, true and good, while others are construed as inappropriate, untrue and undesired. Consequently the study of discourses is closely related to the study of power relations, focusing on how these relations are operating in the spoken [or written] words. The questions that arise within this framework are e.g. How do some discourses maintain their authority? Why do some ‘voices’ get heard whilst others are silenced? Who benefits and who does not? Critical discourse analysis is a method used to study discourses and their relations to sociocultural practices, which allows for a critical perspective on the society. Critical discourse analysis is especially suitable for studies of texts such as steering documents, interview transcripts etc. The analyses focus on how discourses express themselves, e.g. in teachers’ statements about quality. The method provides a number of analytical tools such as: *Normalization* [What is expressed as a ‘truth’? What does this ‘truth’ encompass?]; *Pronouns used* [Who are made responsible?]; and *Modality* [How forceful are the statements?]

The short extracts from our analyses demonstrate how language contributes to create, consolidate and sometimes change the perceptions of quality in socio-political institutions such as the Swedish municipal preschool. We exemplify how power relations coexist or concur within this discourse, and illustrate the discursive shift which seems to have occurred.

Conclusively, discourse analysis neither describe quality nor prescribe how it can be achieved. It contributes to our knowledge about the ‘truths’ and power relations that are
embedded in the spoken and written ‘talk’ about quality. This knowledge is not merely of academic interest. It can also prove useful for teachers trying to understand and relate to the circumstances under which they are expected to create and evaluate quality in a school setting.

A4.2 Construing and re-construing quality driven teacher work
Carola Aili and Marie-Louise Österlind, Kristianstad University, Sweden

Abstract
Teachers’ opportunities to perform good teaching are crucial not only for their pupils’ goal achievement but also for the teachers’ self-confidence and work satisfaction. Several studies show that teachers spend considerable time performing tasks that can increase or decrease their prospects of achieving high teaching quality, and furthermore that they often have to prioritize among concurring and sometimes conflicting task. In this paper we discuss a research approach which has been developed in an on-going project [September 2011 – November 2015] aiming to answer the questions: Which tasks do teachers consider being of direct importance for the quality of their imminent teaching? Which circumstances in their daily work facilitate and render or impede and obstruct that these tasks can be performed with good quality?

In the four part studies we use a combination of web-questionnaires, interviews, observations and document studies. The design and results are discussed in the project reference group, and with the participating teachers. Results are also presented in larger forums for teachers and head teachers in the local municipalities. Our methodological frame of reference derives from constructivist theory, in which the “language” [here meaning the way we talk about] that teachers use when talking about their work is regarded “coordinates for the everyday life”. When we, the researchers in this project, add our concepts about teacher work and our instructions to the teachers on how they are asked to regard and describe tasks which they themselves have identified, we add our coordinates. These new coordinates are expected to facilitate the researchers’ data collection. And in addition to this contribute to the teachers’ construing and re-construing of their work, and to enable the use their “language” as place for storing and developing new and more advanced collegial knowledge and experiences regarding the organizing of teacher work.

We aim to focus our discussions in this paper on:
- The knowledge contribution to quality driven teacher work that our design can offer.
- How the design can facilitate the teachers’ knowledge development concerning their work in a way that can contribute to their professional and collegial development.

Short extracts of data from the project are used in order to give an insight in the potentials and limitations of the presented approach. Conclusively this is related to previous research on teacher professional development and teachers’ professional language.

A4.3 Improving teachers teacher and learners learning
Mona Holmqvist, Kristianstad University, Gothenburg University, Sweden and Charlotte Tullgren, Kristianstad University, Sweden

Abstract
Morris & Hiebert (2011) point out a number of important considerations for improving
teaching; their main focus is on “creating shared instructional products”. The collaborative work among teachers, in combination with small assessments of the children’s learning, has been shown to be an excellent means of improving quality in teaching situations. The teachers’ assumptions are closely linked to Hattie’s (2012) arguments for getting teachers to plan lessons or learning activities collaboratively. However, it is not about finding the best activities or lessons, it is about studying what it takes to learn at different ages and in different subject areas. In the same way as researchers are supposed to build their knowledge on the shoulders of other researchers, the development of teaching should build on knowledge of previous praxis and its outcomes. Such iterative processes have been used in other cultures for decades. See e.g. lesson study in Japan (Lewis, Perri and Friedkin, 2009), for example, and learning study in Hong Kong (Lo, 2012). Both Hattie (2011) and the theoretical framework applied in learning study, i.e. variation theory, have been influenced by Bransford’s (2000) suggestions that classrooms must be learner-centered, knowledge-centered, assessment-rich and community-centered. Learning Study implies a way to arrange teaching which means that a specific and well-defined learning object is focused and emphasis is put on how the content is presented to the learners. This enables teachers to take the learners perspective and understand the critical aspects of a learning object. In this paper we argue for how learning study could be used to study and improve teaching and thereby put focus on quality in teaching. Our short examples from previous learning studies demonstrate how teachers’ awareness of children’s thinking and learning can create a learning environment of high quality.

A4.4 Guideline: A process-oriented learning and support for quality in professional dialogues during work placement in preschool teacher education
Carita Sjöberg Larsson and Ann Steen, Kristianstad University, Sweden

Abstract
Enhancing quality in professional dialogue during work placement in Swedish preschool teacher education this paper focuses an example of a collaborative developmental project in an ongoing participatory oriented research study. The example illuminates a process oriented guideline and a product-based material that may support and improve the professional dialogues. This paper present an ongoing participatory oriented research project in which quality in the professional dialogue during work placement is The aim is to describe the importance of relations in a professional dialogue; delineating topics being discussed as well as suggested types of dialogues for professional progression in the professional dialogue related to either supervision, review or assessment. Subjects of matter are trust/reliance, professional and personal relations, skills and subject-knowledge’s, how to challenge and problematize professional development. The project is inspired by social-cultural theory in which linguistic communication is a fundament for sense making and knowledge creation. Man is considered as communicative being, directed towards interaction with others. The participating supervisors discussed issues regarding professional dialogues. Three taped discussions were sent to the participants to individually listen to and reflect upon in advance, before next discussion in the focus-group. Reflected issues then discussed further. The project shows deepened knowledge and skills concerning the professional dialogue The discussed themes formed the basis for the development of a guideline construed by the authors. This guideline was tested in an
authentic setting by the participants, and thereafter evaluated. The participants describe a learning process as an individually accomplished learning through communication and cooperative discussions. The guideline has offered concretized knowledge and shed light upon challenges performing supervised, professional dialogues. The project has resulted in a guideline which may support and improve the professional dialogues in during work placement in teacher education.

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<th>Session number: A5</th>
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<td>Symposium</td>
<td>Chair/organizer(s): Jo Tondeur</td>
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<tr>
<td><strong>Capacity building for 21st century learning in secondary schools in Africa: The case of ICT integration</strong></td>
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<tr>
<td><strong>Abstract</strong></td>
<td>Discussant: Petra Fisser</td>
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<td>The demands of the 21st century dictate that learners should be equipped with requisite skills to competently engage and perform in the new information age. These skills commonly referred to as 21st century skills include interalia; critical thinking, problem solving, collaboration, creativity and communication (Voogt &amp; Pareja, 2012). When the learning opportunities presented by ICT are well utilized, they have a great potential to develop 21st century skills. In view of the above, policy makers across the world expect ICT to be widely deployed for teaching and learning in primary and secondary schools (see e.g. Quality Education and Training for Vision 2030). However, a simple placement of hardware and/or software will not make ICT integration naturally follow (Tearle, 2004). One of the key failures of many past programs in Africa – and the rest of the world - was that schools were provided with equipment but with little or no support for teachers’ professional development, national and local ICT policies, and/or community involvement. This symposium brings together researchers who are evaluating ICT-integration in developing countries. The variety of the studies addresses many of the current issues related to the processes of and capacity building for ICT-integration. The contributors to the symposium will be invited to focus on the consequences of their study with respect to professional development and policy making. This relation fits into the conference theme “Excellence of teachers? Practice, policy, research”. The discussion will focus on the challenges and opportunities inherent in understanding how to prepare schools in developing countries for capacity building in the field of educational ICT use.</td>
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<td><strong>A5.1 Capacity building for ICT integration in secondary schools in Kenya: An exploratory case study</strong></td>
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<td>Jo Tondeur, Ghent University, Belgium; Mike Bill, Maaike Smulders, VVOB, Kenya; Don Krug, University of British Colombia, Canada and Chang Zhu, Vrije Universiteit Brussel, Belgium</td>
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<tr>
<td><strong>Abstract</strong></td>
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<td>The primary factor that influences the effectiveness of learning with new technologies is not the availability of ICT, but the capacity to integrate of ICT in the different subject areas and to prepare for 21st century learning, the scope of the current study. This study investigates a professional development program that provides not only support to equip secondary schools in Kenya with ICT. The VVOB program was designed from a school improvement point of view to support the process of capacity building for ICT integration.</td>
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It built upon teachers’ existing practices and facilitated their reflection of an inquiry into these practices. The school would be a collaborative community to create engaging content that would be shared and assessed (cf. Arntzen & Krug, 2011). In this study we aim to 1) explore how the teachers in the four sample schools integrate ICT in their lessons and 2) gain insight into how this longitudinal intervention affects ICT integration in the four schools. A case study was conducted in four pilot schools - with no previous ICT investments - in the context of secondary education in Kenya. Based on a mixed method research approach, this study aims to critically evaluate the prospects and challenges through the lens of stakeholders at the different aggregation levels: policy makers (macro level), district managers, principals, and ICT coordinators (school level), and teachers and pupils at the micro level. To gain insight into the effects of the program, both quantitative and qualitative data collection were employed in the four cases: questionnaires, focus groups, field observations and semi-structured interviews. The preliminary results suggest that 1) there’s a good understanding by the schools and the individual teachers on ICT integration. Previously, teachers perceived ICT integration simply as teaching computers. 2) Based on this understanding, the various integration teams played a key role in identifying the best infrastructure for the school. This has created ownership by the school stakeholders. 3) At this stage, there is evidence of a lot of peer training in schools due to the availability of equipment.

**A5.2 Developing the technology integration competencies of pre- and in-service science and mathematics teachers in Tanzania**

Ayoub Kafyulilo, Dar es Salaam University College of Education, Tanzania; Petra Fisser and Joke Voogt, University of Twente, The Netherlands

**Abstract**

In 2009, the government of the united republic of Tanzania introduced a framework for teacher professional development (ICT-TPD) aimed at developing teachers’ technology integration competencies (United Republic of Tanzania, 2009). This framework was developed to address the challenges of teacher shortages in key subjects (science, mathematics, English), teacher quality and teacher support using the ICT infrastructure in the Teacher Training Colleges (TTCs) for pre-service and in-service programs. As a possible answer to this policy the authors of this study conducted three small scale intervention studies in the 2010 – 2012 timeframe, in which a professional development arrangement was designed and evaluated. Technology Pedagogical Content Knowledge (TPACK) (Koehler & Mishra & Yahya, 2007) was used as a framework to guide the content of the professional development and collaborative design of technology-enhanced lessons in teams was used as format for the teacher professional development process (Voogt et al., 2011).

The professional arrangement aimed at developing mathematics and science pre-service teachers’ (study 1, Spring 2010) and practicing teachers’ (study 2, Spring 2011; study 3, Spring 2012) technology integration competencies. In the professional development program teachers became acquainted with TPACK, explored technology applications for their subject and collaboratively designed technology-enhanced (science and mathematics) lessons, which they used in their teaching. The findings of the three studies showed that the participants in the professional
development program developed their technology integration competencies, which was shown through self-assessment of their TPACK development, through their lesson plans and through observations of their lessons. The positive findings of the three studies show the immediate effect of the professional development program. However, the aim of most professional development programs is on effects after its termination (Harvey & Hurworth, 2006). For this reason an impact study is (currently) conducted to investigate the long-term effects of the professional development arrangement. The likelihood that the effects of a professional development program will sustain over time depends on several factors. Buabeng-Andoh (2012) distinguishes between personal (attitude, teaching experience, workload), institution (accessibility to technology, technical and leadership support) and technological characteristics (relative advantage of a given technology) as perceived by an individual teacher. Buabeng-Andoh, presents professional development as part of the personal characteristics. However, given the focus on professional development interventions in this study professional development characteristics will be investigated as an individual factor contributing to the long-term impact of the professional development (cf. Eickelmann, 2011). In this study we returned to the participants of the professional development program to investigate teachers’ appreciation of the professional development program for their professional practice, their current use of the acquired technology integration competencies and the (personal, institutional and technological) factors that contribute or hinder technology integration. In the paper we present the results of the three intervention studies and provide the preliminary findings of the impact study.

A5.3 Pre-service teachers’ development of technology integration competencies: Insights from a mathematics-specific instructional technology course in Ghana
Douglas Agyei, University of Cape Coast, Ghana and Joke Voogt, University of Twente, The Netherlands

Abstract
In spite of the positive impact of the use of technology on students’ mathematics achievement (e.g. Bottino & Robotti 2007), evidence suggests that pre-service teachers do not feel prepared to effectively use technology in their (mathematics) classrooms (e.g. Kay 2006). Recent calls have indicated that to prepare pre-service teachers for effective technology integration, teacher education programs need to help pre-service teachers build competencies in three knowledge domains: pedagogy, technology, and domain knowledge, and provide pre-service teachers with experiences on how these knowledge domains interact. Koehler & Mishra (2008) referred to these competencies as Technological Pedagogical Content Knowledge or TPACK. The purpose of this paper is to explore the impact of strategies applied in a mathematics-specific instructional technology course (MIT) for developing technology integration competencies, in particular for the use of spreadsheets, in pre-service teachers. The study has been conducted in one of the major pre-service teacher preparation programs in Ghana. The following strategies were applied in designing MIT: aligning theory and practice, collaborative design, learning technology by design, modeling how to use technology and scaffolding authentic technology experiences (Tondeur et al., 2012). 104 Pre-service mathematics teachers enrolled in MIT, which lasted one semester. The development of pre-service teachers’
technology integration competencies were assessed through the analysis of lesson plans and lesson observations, their self-reported TPACK (pre-post), and their attitudes towards technology (pre-post). Findings showed that pre-service teachers’ technology integration competencies, in particular the use of spreadsheets, improved after participation in MIT. Evidence from the study showed that all strategies were considered important, but in particular, scaffolding authentic technology experiences including feedback from teaching try-outs made a significant contribution to the teachers’ developed technology integration competencies. Based on the findings of this study we argue that pre-service teacher education programs need to create opportunities to allow pre-service teachers to 1. link theoretical information with practical applications; 2. collaboratively design technology-enhanced lessons with their peers; 3. get scaffolds and authentic technology experiences (teaching try-outs or micro teaching) to reduce pre-service teachers’ anxiety about technology use in instruction and increase their enthusiasm; 4. see how technology can be used as demonstrated by role models or in exemplary curriculum materials.

PAPER PRESENTATIONS

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<td>Impact of leadership on teaching practice</td>
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<tr>
<td>A6.1</td>
<td>Educational Leadership: The impact of school management on the quality of teachers' work</td>
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<tr>
<td>Larissa Frossard Rangel Cruz, Fundação Educacional de Macaé, Brazil</td>
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</table>

Abstract

The purpose of this paper is to discuss the impact of school management on the quality of teachers' work as measured by students performance on large scale assessments. The analysis was developed based on the responses provided by management teams and teachers from two public schools in a survey as well as semi-structured interviews. The schools function under the same policy, provide elementary and middle education, have similar architectural design, and serve students with similar socio-economic status; however, school wide assessment results differ significantly. This is the qualitative stage of a doctoral research project which aims to examine how educational indicators are appropriate and used by school stakeholders in the planning of teaching units, especially by managers, through a case study in the city of Macae / RJ / Brazil. One goal of the survey and the interview was to analyze how the management teams assess the performance of teachers and, in the case of teachers, how they assess the actions taken by management teams. The school is a social construct and its organizational model is essentially plural and dynamic; therefore, it becomes important to analyze how these factors can interact in the best interest of the education. Studies have shown that the leadership of school administrators with teachers can influence student outcomes demonstrating the importance of context for school effectiveness. The organizational commitment of teachers is mainly related to the support they receive and their participation within the
leadership team. Research shows that positively perceived work environment in schools is correlated to good student outcome in school wide assessments. This can be explained by the role of educational leadership necessary for school management to the extent that their actions have an impact on levels of commitment, cohesion and satisfaction of teachers in performing their activities.

A6.2 **What is teacher agency for combating exclusion and educating all students?**

Natasa Pantic, University of Edinburgh, United Kingdom

**Abstract**

Policies worldwide propose that various educational changes are to be engineered through teachers, enabled by their development and (re-)education. In Scotland teachers engage with ambitious educational change agendas introduced by the Curriculum for Excellence in 2004. Recently, a fundamental review of teacher education has established how teachers are to be better prepared for their roles of prime agents in shaping and leading educational change (Scottish Government, 2011). One of the recommendations of this review, endorsed by the government, suggests that the professional standards for teachers be revised to reflect a reconceptualised model of teacher professionalism embedding leadership across teacher standards. In other words, leading the change is likely to become a requirement for all teachers rather than a voluntary choice of some. In turn, teacher education is increasingly asked to provide evidence that all graduates are reaching the standards. In this context it becomes essential, equally for policy makers, teachers and those who educate them, to clarify what could count as evidence of teachers’ leadership and agency for change. This paper seeks to articulate and operationalise teacher agency (TA) so that it could be subject to empirical analysis.

**Conceptual framework.** The notion of teacher agency is under-theorised relative to the volume of evidence about the powerful role teachers play in students’ learning. Hattie’s (2009) meta-study of students’ learning identified teachers’ relationships with students and maintaining high expectations for all students among the most powerful determinants. Building relations with students implies agency, efficacy and respect by the teacher for what a child brings to the class (from home, culture) and allowing the experiences of a child to be recognised in the classroom (Cornelius-White, 2007; Hattie, 2009).

For this study we defined TA as taking leadership for combating exclusion and educating all children. Frost (2012) describes teacher leadership as a process whereby teachers develop a vision of improved practice and act strategically to evaluate and improve own actions, sharing responsibility for reform and the outcomes for all students. Teachers’ potential to generate social and educational change using their power inside and outside the classroom has long been recognised (Freire, 1970; Giroux, 1988; Nieto, 2007) in teachers who conceive of themselves as change agents and believe that all students can learn and progress (Hattie, 2009; Priestley et al., 2012 ); understand how broader social forces influence schooling, and address changing conditions that affect their teaching (Frost et al., 2000; Liston & Zeichner, 1990) and link their agency to a moral vision (Fullan, 1993; Nieto, 2007; Pantić & Wubbels, 2012). Yet, research on teachers’ roles as change agents is often normative, with scant evidence of how such agency manifests in teachers’ practices and development (Fullan, 1993; Hargreaves & Fullan, 2012). Teacher development for shaping and leading educational change seems essential, yet premature without a prior clearly
conceptualised knowledge base for building teachers’ capacity to lead the change combating exclusion and educating all students.

The proposed paper seeks to clarify the concept of TA combining theoretical and practical insights. The theoretical explorations involve application of theory relating to agency in general to the study of TA, guided by Giddens’ (1984) theory of structuration, Archer’s relational theories of agency emphasising the influence of societal structures and human cultures (Archer, 2000), and Biesta and Tedders’s (2007) ecological view of agency. The practical insights are gained from the data on teachers proactively leading the change for educating all children, available from the International Teacher Leadership project (Frost, 2012) and from consultations with teachers taking ‘teacher leadership’ course at the School of Education of the University of Edinburgh at Master’s level or as part of their continuous professional development (CPD).

Findings. Teachers’ practices for leading change have been identified at individual level (e.g. in the use of inclusive pedagogies in their classroom), school level (e.g. initiating collaborations with colleagues and communities) and at broader policy and societal levels (e.g. through engagement in networks advocating for the profession). Contingencies of the contexts (of school, policy or broader societal and cultural environments) seem to have considerable explanatory power for the exercise of TA and merit further investigation. Based on this study we developed, in collaboration with ‘teacher leaders’, the descriptors of TA for change in teachers’ classroom, school and policy engagements.

Conclusion. Considering the directions of change in education worldwide, these descriptors of TA could be used for future studies of interactions between TA and the environments in which it is exercised, across different school, policy and social contexts, with the view towards identifying practices and policies helpful for TA development.

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**A7.1 Students’ perspectives on significant and ideal learning experiences – A challenge for the professional development of university teachers**

Jana Kalin and Barbara Šteh, University of Ljubljana, Slovenia

**Abstract**

This article is grounded in modern cognitive-constructivist notions of knowledge, learning and teaching, which stress the dynamic nature of knowledge and its constant construction and reconstruction. Within such a frame, the student’s own activity is key, as learners actively construct their own knowledge through a deep approach to learning and self-regulated learning activities. The traditional conception of knowledge in the sense of final truths which are accumulated and transmitted to others needs to be transcended. Namely, the social-constructivist theory stresses the importance of participative learning and knowledge formation in interaction with others. Students’ learning experiences may be analysed from two perspectives. Firstly, from their opinion on who is responsible for learning: whether they stress transfer of knowledge from learning experts or the student’s development towards independence in (re)constructing knowledge and directing one’s own learning. Another aspect refers to individuals and groups where we are interested in
whether students prefer individual learning or mutual formation of knowledge in a group. The paper presents a study of students’ significant and ideal learning experiences as triggers of university teachers’ professional development, the latter defined as “the process of significant and continuous learning in which teachers develop and add meaning to their conceptions, and change their teaching practices. This process involves teachers’ personal, professional and social dimensions and signifies their progress towards critical, independent, responsible decision-making and acting.” (Valenčič Zuljan, 2001). Students’ feedback and teachers’ own reflection on their teaching act as important triggers for quality shifts in their teaching and professional development.

The results of empirical research, during which we used a questionnaire with predominantly open-ended questions, will be presented. The sample included fourth year students of pedagogy and andragogy at the Faculty of Arts of the University of Ljubljana. We were interested in the degree of students’ satisfaction with the quality of education and what conceptions about teacher’s and student’s role they had formed during their studies. Of the many research questions, this paper only deals with analysis of learning experiences which had a particular impact on students, and their notion of an ideal study environment. In this manner we attempted to reflect on the quality of studying and, based on significant learning situations, gain insight into the influence a teacher’s teaching may have on their students’ professional and personal development. Thus the question arises of how much university teachers are prepared for in-depth reflection on their own practices, to what degree they are ready to take into account feedback they receive from students and whether they are prepared to abandon their customary teaching practices.

A7.2 Examining the evolving nature of teachers’ thinking on the meaning of teaching: Studying exemplary teachers
Khall Gholami, University of Kurdistan, Iran, University of Helsinki, Finland; Mohammad Amjad Zabardast, University of Kurdistan, Iran and Abas Ahmadi, Kurdistan Organization of Education, Iran

Abstract
Statement of the problem. One of the most important parts of teachers’ professional development is to gain insight into their thinking on, and understanding from teaching over the years of experience. It is believed that the teachers’ thinking will be more complicated and developed in line with their practical experiences. According to a developmental theory, content knowledge mastery is not the only concern about teachers, it is important to know how teachers learn and make meaning during their professional and personal experiences. Understanding such meaning on teaching can help teacher educators fill the gap between theory and practice. The term teachers’ practical knowledge, for example, refers to the kind of teachers’ thinking and knowing that they develop during their professional experiences, with which can cope with very practical challenges of the classroom. Relying on Kegan Plateau (1994) we addressed the following main research question: What are the core meanings of exemplary teachers’ thinking on teaching and how they have evolved during the course of their teaching experiences?

Theoretical framework. We used “constructive-developmental” theory to guide our research. This term was first suggested by Kegan (Kegan, 1980) with which the researchers...
can explain the development of meaning and meaning-making processes across the lifespan of people. According to (McCauley, Drath, Palus, O’Connor, & Baker, 2006) this theory is “constructive” in the sense that it deals with a person’s construals, constructions, and interpretations of an experience, that is, the meaning a person makes of an experience. It is “developmental” in the sense that it is concerned with how those construals, constructions, and interpretations of an experience grow more complex over time. Kegan (1982, 1994) outlined six stages or orders of consciousness in cognitive development, through which individuals evolve their meanings from simple and immediate impulses to complex and creative understanding about systems. As meaning-making evolves, thinking become less rigid, exclusive, simple and dogmatic and more open, complex and tolerant of differences ((Eriksen, 2006). This theory has been increasingly applied in different fields of study such as leadership, counseling and other social sciences.

Findings. Using a narrative strategy, this study was conducted in capital city of Kurdistan, Iran. In this context, exemplary teachers are systematically selected in each educational district based on different pedagogical competencies as well as their practical functions in the classroom. Data were collected with narrative interview from 20 teachers on a voluntary basis. We used an abductive procedure to analyze data, in which applied plateau of Kegan plateau (1982, 1994) to see how teachers' narrative was developed during their teaching experiences. The findings showed that these teachers had five basic meaning about teaching: making a difference, learning in community, lifetime learning, development in crisis and challenges, and gaining from teaching. A meta-analysis on findings suggested that "learning and nurture" was at the core of teachers’ thinking and thus linked the other meanings and concepts. The teachers’ thinking and making meaning evolved from a personal (e.g., teaching as a job) to social (e.g., teaching as a learning community) and philosophical level (e.g., teaching as their intellectual identity).

A7.3 Reassessing assignment work to leverage student teachers’ professional learning
Dawn Garbett, University of Auckland, New Zealand

Abstract
Assignment work is one of the key tools for teaching in Higher Education. It is an area most commonly framed by an assessment discourse which foregrounds the value of assignments for the purposes of measurement and feedback. Less common is thinking about how assignments can be used to help structure the pedagogical work of the course. The aim of this research is to examine how an assignment task can be used as a pedagogical tool to leverage student teachers’ professional learning in a teacher education course. Specifically, I focus on how the use of a collaboratively assessed course test can be used to extend the learning opportunities afforded to students beyond lecture context and help develop their confidence and competence to teach science.

The framework for this study draws on concepts from the pedagogical literature in teacher education and cooperative learning. Central to this framework is the notion that ‘teaching’ is both the process and product of teacher education. Consequently, as a teacher educator committed to teaching in meaningful ways, reflecting on the process of ‘how’ students learn to teach becomes as important as the outcome of students being able to teach.

I used an Action Research approach to accommodate my situatedness in the research setting and take advantage of an iterative approach to researching my practice. Through two cycles of action research, changes were made to assessment practice and the
responses to, and effects of, those changes were gathered, analysed and considered. This led to further systematic planning, action, observations and reflection (Kemmis & McTaggart, 1988).

The process of collecting and analysing data was carefully planned for in each cycle. Student teachers’ perspectives were generated through questionnaires and interviews. An SPSS codebook was written and students’ responses to the Likert-scale items were entered. Students’ answers to open ended questions were read and re-read before using the constant comparative method for analyzing the data (Glaser & Strauss, 1999). Lecturers teaching on the course were also interviewed and their perspectives gathered through moderation meetings. The iterative nature of action research approach allowed me to reflect on the outcomes of the first cycle and make modifications for the second. I reported the findings and reasons for change to the students – both as a form of member checking and to reinforce for them the importance of evidence-based teaching

A number of outcomes can be identified from this research. It became clear that a collaboratively assessed science content and pedagogy test would encourage deeper learning if students appreciated it as an authentic task which reflected the ways in which knowledge and skills were used in the community. To achieve this, the questions posed in the science content and pedagogy test incorporated understanding of basic science concepts and also evaluated students’ ability to make the science content accessible to learners through the use of sequenced activities and experiments. However, the assessment task was not sufficient by itself to motivate students to practice pedagogical skills. In order to achieve this, the assignment was structured to ensure positive interdependence and individual accountability within a group of four. When motivated in this way, the students worked collaboratively to teach and learn all of the questions equally well (Johnson & Johnson, 2003).

Students’ and lecturers’ response to the assignment was generally positive and many limitations that had concerned me about the focus of the previous assessment schedule were alleviated. These concerns included limited science content knowledge and few opportunities to observe or practice teaching science. Students’ feedback led to several improvements in the assignment and delivery of the course.

In conclusion, the assessment task analysed in this study revealed itself as a pedagogical tool that structured student learning. Through trial and reflection, this study shows that it is possible create situations in which student teachers work together on authentic and relevant tasks in ways that represented the potential for students to engage in, and reflect on, the nature of knowledge and pedagogies for teaching science. Overall, this project also demonstrated the importance of broadening the way we think about course work so that assessment discourses do not over-dominate the possibility of thinking about assignments in pedagogical ways. As Clarke and Erickson (2004) argue “when teachers cease to be inquisitive about their practice... then their practice ceases to be professional” (p.58).
### Session number: A8  
**Location:** Room 1C  
**Time:** 15.30 – 17.00

**Paper presentations**  
**Web 2.0 practices in education**  

**Chair:** Annelies Raes

| A8.1 | Using Web 2.0 to develop conceptual understanding in a pre-service science methods course  
Rena Heap, University of Auckland, New Zealand |
|------|-----------------------------------------------------------------------------------------|

**Abstract**  
Problem statement. The knowledge society has priorities for learning which are so different from traditional education that it could be said to constitute a new paradigm (Gilbert, 2010). Hodson (2011) proposes that universal critical scientific literacy is one such learning priority to prepare students to manage life in our changing world. A scientifically literate individual can be described as one who: appreciates the strengths and limitations of science and technology; knows how to utilise scientific knowledge and scientific ways of thinking for living a better life, e.g. in personal decisions concerning diet, health etc; can cope with an increasingly scientific and technological world; and make informed decisions regarding important scientific, social and environmental issues. This scientific literacy demands 21st Century skills such as critical thinking, problem solving, self-directedness and communication.

Central to all definitions of scientific literacy is an understanding of the ‘nature of science’ (NOS). However, research studies to date have shown that teachers generally do not hold informed understandings of NOS regardless of their academic ability, academic background, or teaching experience (e.g., Akerson, Morrison, & Roth McDuffie, 2006). Preservice teacher education institutions must therefore take seriously their role in adequately preparing teachers to teach NOS. They need also to support teachers to acquire the digital literacy required for their teaching practice. These are both major challenges.

To address both these imperatives, NOS and digital literacy, this study examined the effectiveness of using a Web 2.0 platform, Piazza, in a semester-long science methods course as part of the one-year programme of the Graduate Diploma in Teaching Primary (n=167) at a leading University. Piazza is a social learning network combining personal communication, instant messaging, wiki, and social networking and is able to work in real-time. It was used during every lecture and also accessible by students from any computer at anytime outside lecture hours. This provided multiple opportunities for the learning and reflection required to effect conceptual change of NOS. Almost without exception students enter this course with very limited understanding of NOS so the conceptual change required is therefore significant, and the time frame is short. It was hoped that using Piazza would facilitate the development of understanding of NOS and also develop competence and confidence in digital literacy.

Research aim. The research aim was to identify existing NOS understandings and to map shifts in these understandings over the duration of a science course that provided structured and repeated opportunities for reflection by using the Piazza platform. The research was embedded in critical social science methodology as underpinning both critical social science and the educational goal of scientific literacy and NOS is the emphasis on transformation, emancipation, and change (Neuman, 2003).
Findings. Data on students’ developing understandings of NOS was gathered using a range of data collection tools including the VOSTS questionnaire (Aikenhead & Ryan, 1992), the VNOS C questionnaire (Lederman, 2002), students’ submissions on Piazza (during and outside class time) and assignment and test data. Analysis of the data, which will be presented in the full paper and presentation, showed a considerable shift in students’ expressed NOS views.

The students were also asked at the completion of the course to complete a questionnaire specifically evaluating their experience of using Piazza. The students’ responses were analysed and coded for emerging themes. More than 70% of the students evaluated Piazza as having facilitated explicit teaching and learning of NOS. 82% commented that it increased their confidence in digital literacy. (Table 2.)

Conclusion. Analysis of Piazza postings show increasing participation as well as increasing understanding of NOS concepts over the course’s duration. This relates to Lave and Wenger’s (1991) perspective of situated learning where the understanding is a result of on-going construction, and learning is a process of increasing participation in a community of practice (Lave & Wenger, 1991; Orgill, 2007). The capacity to continue learning beyond class time fostered the construction of this knowledge-building community and the turning over of epistemic agency to the students.

As a limited-sample case study, the findings can help inform the use of Piazza and other Web 2.0 platforms in areas much wider than the development of NOS understanding in a tertiary setting. The student engagement, flexibility of learning contexts, and the quality of students’ contributions have prompted the continuation of this research project.

A8.2 Digital technology and school leadership. Tools use and practices in innovative schools
Trond E. Hauge, University of Oslo, Norway

Abstract
In a few years “Web 2.0” services such as blogs, wikis and social bookmarking applications, as well as social networking sites like MySpace, Twitter and Facebook, have become an integrated part of young people social networking in western societies (Lenhart & Madden, 2007; Lenhart et al. 2010) influencing the institutional contexts of communication and learning in school and higher education (Silseth, Vasbø & Erstad, 2012). However, despite this widespread use of Web2.0 teaching and learning in school is a conflicting area for integrated use. Web2.0 practices are challenging established norms and values in education, institutional structures and authorities, assessment systems and task cultures of learning (Luckin, 2010; Lund, Rasmussen & Smørdal, 2009). While most of the Web2.0 studies in school are focusing on teaching and learning at the classroom level, this paper investigates the affordances of these technologies and the choices and constraints they offer to principals and middle managers in managing and developing their schools.

The research question focuses on how principals and middle managers are using Web2.0 technologies as tools in leadership and management and what affordances these tools offer to their work in terms of new possibilities and applications.

This study is a follow-up of previous studies describing technology-enhanced practices in primary and secondary schools and the role of leadership for learning and institutional
change (Olofsson et al., 2011; Hauge et al., 2012; Hauge & Norenes, 2009).

Principals and middle managers in three secondary schools in Norway are selected for interviews and field studies concerning Web2.0 practices at the institutional level. These schools are innovative pilot schools of technology-enhanced learning and are known as schools with high-level use of technology in teaching and learning. Interviews are semi-structured and implemented as focus-group interviews. The fieldwork includes descriptions of technologies in use and patterns of organisational and educational management. Leadership approaches are investigated. In conceptualising the research design and technology use, we draw on theoretical perspectives from Cultural-Historical Activity Theory (CHAT) (Engeström et al., 1999; Daniels et al., 2009; Ellis et al. 2010).

The findings underline the conflicting cultures between established routines, work distribution and tools use for planning and management in schools and the new practices afforded by Web2.0 tools. However, we also see how Web2.0 practices are affording new possibilities for communication, work distribution and school development. The study illustrates contradictions between technology oriented design and institutional design for teaching and learning; however, school leaders play a crucial role in bridging the gaps when taking a leading professional role for development. A set of ethical questions arises as an open collaborative work pattern collides with institutional regulations.

A8.3  **Wikipedia as a catalyst for MEd students’ knowledge construction**
Nicola Simmons, Brock University, Canada

**Abstract**

In 2009, Mike Wesch gave a keynote about student collaboration using online platforms. His video *A Vision of Students Today* (Wesch, 2005) (over 4.6 million viewers) is a powerful example of his messages. My insights from that keynote collided with two other events. One was hearing faculty assert their assignments were much stronger since they had stopped allowing students to use Wikipedia. I pondered this, wondering how disallowing a particular knowledge source helped students develop habits of scholarly inquiry. The other was a graduate orientation reminder that in graduate school, students were required to do more than use existing knowledge: they must create new knowledge. This confluence of events caused me to think deeply about social construction of knowledge. As a result, I gave my Master of Education students an assignment that required them to locate a course-related Wikipedia page and critique it, discussing its strengths and limitations along with their recommendations for improvement, and then to make the appropriate edits. The assignment was intended to help students develop their research skills in an introduction to graduate study course and also to prompt a discussion about use of sources and cross-referencing.

While content is important, process skills such as critical thinking, problem solving, self-guided inquiry, appropriate use of resources, and others are essential skills in this century (author, forthcoming). However, Heil (2005) notes that students often take the route that yields the quickest information, foregoing academic journals and scholarly databases in favour of websites and Wikipedia. O’Sullivan and Scott (2000) found students primarily chose internet resources for reasons of expediency, with only 10% noting limitations to internet information.

Post-secondary graduates must be critical of resources and technically savvy regarding online collaboration tools. We live with social construction of knowledge, or “knowledge
and information with multiple creators, collaborative knowledge created without traditional hierarchies of power, and through dispute and negotiation” (Maehre, 2009, p. 232). The 21st century world calls for graduates who are engaged in knowledge creation and can collaborate easily with others in this regard. Hammett and Collins (2002) note graduate students expect to “see themselves as producers of knowledge and acknowledged members of an academic community” (p. 439). While students may be encouraged to publish or present their work, they may have little authentic opportunity to practice these graduate level skills, particularly if they take a course-based route.

Ethics approval was sought to conduct a survey of students’ perceptions about the assignment. The following year, in fall 2012, students were asked to write a reflective paper as part of the assignment and were invited to submit this as data for the study. Analysis of these data suggests significant growth in understanding of knowledge construction and self-authorship (Baxter-Magolda, 1999) as emerging academics. Some participants’ reflections suggest an even deeper re-working of personal constructs (Kelly, 1955). In this session, I detail the findings around assignment challenges, ‘peer’ pressure online, Wikipedia as a scholarly source, meta-cognition about knowledge use and creation, and recommendations for future practice and research. I outline the transformative learning (Mezirow, 1991) students experienced as a result of this assignment and discuss the paradigm shifts that can result when students engage in knowledge critique and creation. Not only did they become knowledgeable about the particular topic they had chosen as they researched further details for their recommendations, they also experienced frame of reference shifts as they re-construed (Kelly, 1955) what they thought about knowledge creation. As one student put it “I came to realize that creating knowledge was actually about creating the self.”

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**A9.1 Promoting elementary students’ autonomous reading motivation: Effects of a teacher training grounded in self-determination theory**

Jessie De Naeghel, Hilde Van Keer, Maarten Vansteenkiste, Leen Haerens and Nathalie Aelterman, Ghent University, Belgium

**Abstract**

At the end of elementary school students are expected to have learned to read and to be reading to learn (Bakken & Whedon, 2002). To achieve this goal, it is essential that students become competent in reading as well as committed and motivated to read throughout elementary school. Recent reading motivation research (De Naeghel, Van Keer, Vansteenkiste, & Rosseel, in press) indicates that not reading motivation in general, but especially the quality of students’ reading motivation needs to be considered, a point emphasized within Self-Determination Theory (SDT; Ryan & Deci, 2000). Particularly, students’ autonomous reading motivation, which occurs when students read out of pleasure or out of perceived personal significance, positively contributes to their reading comprehension skills and, hence, indicates the prominent role of high-quality forms of
motivation in developing reading competence (De Naeghel et al., in press). In this respect, the observed decline in intrinsic reading motivation in and beyond the elementary school years is a reason for concern (Guthrie & Davis, 2003; Guthrie & Wigfield, 2000). Consequently, the present study aims to explore whether training elementary school teachers to adopt a more motivating style during reading activities serves as a buffer against the observed decline in late elementary students’ autonomous reading motivation. We focused on teaching style as the unit of intervention since the motivation literature generally indicates that students’ motivation during classroom activities can be affected by teachers’ motivating style (Reeve, 2006; Ryan & Deci, 2000). Specifically, past work within the SDT-literature has revealed the relevance of an autonomy-supportive and well-structured teaching style to foster high quality-forms of motivation (e.g., Skinner & Belmont, 1993; Sierens et al., 2009; Chatzisarantis & Hagger, 2009). Promising in this respect is that recent intervention studies have demonstrated that teachers can be trained to adopt a more motivating style through a short yet intensive training on motivational teaching (Su & Reeve, 2011). Despite the increase in research on reading motivation over the past decades (e.g., Becker, McElvany, & Kortenbruck, 2010; Watkins & Coffey, 2004) intervention studies especially focusing on teachers’ motivational style in relation to students’ motivation for reading in the classroom context are relatively scarce (Guthrie, McRae, & Klauda, 2007). Consequently, our study aimed to investigate the motivational effects of an SDT-based in-service training designed for late elementary school teachers, thereby focusing on teachers’ autonomy-supportive and well-structured teaching during school reading activities and evaluating its effect on fifth-grade students’ autonomous motivation for school and leisure-time reading (n=664).

A quasi-experimental repeated measures design (i.e., pretest, posttest, retention test) was set up with experimental and control conditions. The experimental condition consisted of teachers participating in a teacher training aimed at providing the necessary knowledge and skills to implement an autonomy-supportive and structuring teaching style (n=12). Teachers from the control condition (n=26) participated in a delayed training (after the retention test) and consequently continued their current teaching repertoire during the entire study. Multilevel piece-wise growth analyses indicated that students of teachers participating in the teacher training reported more progress in autonomous reading motivation from pretest to posttest relative to those in the control group, with the effects being more prominent for leisure-time reading (chi-square = 7.69, df = 1, p = .006, ES=0.23), compared to school-related reading (chi-square = 3.54, df = 1, p = .060, ES=0.19). More particularly, students in the experimental group reported an increase in autonomous reading motivation from pretest to posttest, whereas the control group declined. Additional analyses further specified that especially boys benefitted from their teachers’ SDT-based training (chi-square_recreational = 4.132, df = 1, p = .042, ES = 0.26; chi-square_academic = 3.611, df = 1, p = .057, ES = 0.26) which is promising as particularly boys are more at-risk when it comes to reading motivation (De Naeghel et al., in press; Smith et al., 2012).

The positive impact of an SDT-based teacher training on students’ autonomous reading motivation is of theoretical and empirical significance, because its impact has rarely been studied in late elementary education and in the domain of research on reading motivation. Hence, the findings of the present study add value to the SDT-framework. In addition, the
positive impact of this teacher training is of particular importance for teaching practice and accordingly for teachers’ professional development in both pre-service and in-service training. By adopting an autonomy-supportive and structuring motivating style teachers can promote students’ autonomous reading motivation and, consequently, provide their students with the necessary reading competencies to be successful in today’s society. Further, the proposed strategies to support the needs for autonomy and competence are valuable as tools for reflection on and improvement of teachers’ current reading practice.

| A9.2 | **Reading instruction and learners’ needs in LINC level 1-3 classes**  
Kim Henrie, Mohawk College, TCET, Brock University, Canada |
| Abstract | Language Instruction for Newcomers to Canada (LINC) classes are federally funded by Citizenship and Immigration Canada (CIC) for Permanent Residents of Canada and Convention Refugees to gain English proficiency in a settlement context (i.e., community-based and cultural information about Canada combined with “survival” English). This study investigates instructors’ perceptions of reading instruction and difficulties among LINC Level 1-3 learners. Statistics Canada (2003) reports that 60% of immigrants possess inadequate literacy skills, and according to CIC (2009), 34.8% of refugees in Canada had completed 9 years of education or less in 2008, a likely sign of first language literacy needs in addition to English needs (Infante, 2000). Newcomers are placed into language classes using the Canadian Language Benchmarks to assess English proficiency; however, large, mixed-level classes create little opportunity for individualized instruction, leading some clients to demonstrate little change in their reading benchmarks. Data (via demographic questionnaires, semi-structured interviews, teaching plans, and field study notes) created a case study of five LINC instructors’ perceptions of why some LINC clients do not progress through the LINC reading levels as expected and how their previous experiences relate to those within the LINC program. Qualitative analyses of the data revealed three primary themes: client/instructor background and classroom needs, reading, strategies and challenges, and assessment expectations and progress, each containing a number of subthemes. A comparison between the themes and related literature demonstrated six areas for discussion: (a) some clients, specifically refugees, require more time to progress to higher benchmarks; (b) clients’ level of prior education can be indicative of their first language literacy skills; (c) clients with literacy needs should be separated into literacy-specific classes; (d) evidence-based approaches to reading instruction were not always evident in participants’ responses, demonstrating a lack of knowledge; (e) first language literacy influences second language reading acquisition through a transfer of skills; and (f) collaboration in the classroom supports learning by extending clients’ capabilities. These points form the basis of recommendations about how reading instruction might be improved for such clients. |

| A9.3 | **The practice of reading aloud in the high school**  
Lionel Warner, Eileen Hyder, Caroline Crolla and Andy Goodwyn, University of Reading, United Kingdom |
| Abstract | When high school teachers read aloud to their students, or when they require their students to read aloud, what purposes are being served? |
The practice of reading aloud, both by and to young children, is widely held to be an important factor in the early development of literacy, and the research literature is considerable based on the primary phase of education. Reading aloud is a pervasive feature of high school classrooms in all subjects, yet the practice is under-researched where teenagers are concerned (Hodges 2011).

Our main approach to this question is phenomenological, asking teachers to characterise their practice in this context and to reflect on its purposes. We have therefore piloted a substantial questionnaire, and followed this up with telephone interviewing of volunteers. We have also held focus groups of school students to develop a flavour of reading aloud practices and their responses to it. The school practice of reading aloud exists in the context of social literacy practices. This is to take an anthropological view, of the kind adopted by New Literacy Studies (see, for example, Street 1997). We have already noted that reading aloud is highly valued where young children are concerned; it ‘is probably the most highly recommended activity for encouraging language and literacy’ (Beck & McKeown 2001, 10). It has been a similarly highly valued social practice in earlier times and cultures (Manguel 1996). And in contemporary society, both at work and in the home, people read aloud (Lundy 2004). It follows from these perspectives that reading aloud may be considered to be a 21st century skill, both vocational and parental.

The pilot phase of our research is beginning to indicate a range of pedagogical purposes of reading aloud, inflected by teaching subject and teacher experience, as well as ways in which teenagers react to being read to, and having to do it themselves.

Schools are interested in our recommendations for professional practice arising from this research; it is interesting to note that few teachers report that reading aloud featured in their training to teach. Some tentative suggestions may be made in this regard.
Huberman, 1994) of the experience of six graduate educators who developed and implemented an applied intervention as part of a graduate Masters course. Each educational site was the subject of an individual case and the use of the multiple case study method, allowed for the in-depth investigation of multiple cases within a range of applied educational settings. Part of the shared teacher education (TE) experience involved designing and implementing an applied education intervention in their schools. The six students who completed the graduate level subject conduct individual research projects. These projects were to specifically address the needs of their individual settings. This task was the culmination of a two and a half year university based Masters course. These accounts were examined to identify the skills and knowledge required to sustain student development and enhance teacher excellence.

This multiple case study design catered for the investigation of the TE and RTP phenomenon through extensive description and content analysis. The methodology included the triangulation of cases with the extant literature. The cases provide accounts of a range of trajectories in terms of the sustainability and scalability of research-based practice in classroom environments. The collective case study approach identified the factors that participants’ presented as having a positive or negative impact on their ability to translate theory (university gained knowledge) -into-practice (school based experiences). This research was guided by the following research question:

How can teacher education promote teacher excellence by reducing the research to practice gap in education? It examined factors that were identified in teacher education literature and direct RTP experiences that influenced research to practice to make educational settings more responsive to the needs of all students.

The consistencies in the teacher education research-to-practice literature and data collected as a result of participant experiences indicated that research alone could only provide a road map to practice. Suggestions that attention should be given to organizational issues so that research-based practices can be sustained over time warrant additional investigation (Miller et. al., 2005). For the TE to have an impact on reducing the RTP gap, a need exists to incorporate empirically derived educational practices into the instructional repertoire of educators (Foegan, Espin, Allinder, & Markell, 2001; Grima-Farrell, et.al., 2011), as teacher knowledge and context are important to conceptualizing the relationship between research and practice (Malouf & Schiller, 1995).

In summary, the implications of this study are three fold. It firstly explores and applies the existing literature on teacher education and RTP as a framework to investigate the diverse cases. Secondly it identifies and explains factors in teacher education that contributed to the status of research-based projects in practical applications. Thirdly this research contributes to promoting teacher excellence by expanding upon teacher education knowledge through building upon these assertions to enhance the use of effective teacher education practices that address the needs identified by school based practitioners as they strive to address the diverse needs of our students.

A10.2 Teaching Lab: Bridge over the theory-practice gap
Per F. Laursen and Stine Larsen, University of Aarhus, Denmark

Abstract
The gap between theory and practice in teacher education is an old, much discussed, and much re-searched problem. “Bridging the gap between theory and practice in professional
education” is a 4-year Danish project aiming at a closer analysis of the problem and of different solutions.

Coherence in educational programs has been proposed as the solution to the problem of the perceived gap between theory and practice (Grossman et al. 2008). In an earlier paper (Laursen & Knudsen 2011) we demonstrated that coherence must include the basic views and understandings also of the student teachers. Student teachers do not necessarily accept the theory-practice concept of an educational program, even if the program is coherent. Student teachers seem to arrive at college with preconceptions about theory and practice. The students’ preconceptions are not necessarily identical with the conceptions behind the teacher education program. Today most programs are inspired by the idea of educating teachers to become reflective practitioners. The student teachers do not necessarily adopt this college conception on theory and practice. Most of them want to learn how to teach – not how to reflect on teaching. Most students expect teacher education to equip them with a “toolbox” and to cultivate their personal qualities. Initiatives to bridge the theory-practice gap must be meaningful both to the college’s idea of reflection and to the student teachers’ expectation of a toolbox.

A promising bridge over the gap was developed by a Danish college and named Teaching Lab because it aims at letting the student teachers work in school as a kind of laboratory: Student teachers develop a project or an idea that they want to try out in authentic practice by teaching a few lessons in school. Their teaching is observed and analyzed both by a college lecturer and a teacher from the school. As part of our research project we observed cases of student teaching and the succeeding analysis, interviewed student teachers, lecturers and schoolteachers. The college used a questionnaire to find out how the students in general evaluated Teaching Lab. The results showed that Teaching Lab succeed in creating a laboratory-like approach to teaching. It was possible both to inspire the student teachers to analyze and reflect on teaching in accordance with the ideas of the college and the lecturers. And at the same time the student teachers experienced that they acquired new tools to their “toolbox” in-the-making.

Conclusion: Teaching Lab seems to be able to bridge the gap not only between theory and practice but also between colleges and students teachers.

A10.3 Connecting and integrating theory and practice in teacher education: Findings from a Canada-wide study

Ronald MacDonald, University of Prince Edward Island, Canada; Karen Goodnough, Memorial University of Newfoundland, Canada; Thomas Falkenberg, University of Manitoba, Canada and Selvi Roy, University of Prince Edward Island, Canada

Abstract

Problem Statement, Research Questions. According to the ISATT subtheme description, teacher education programs may have little or no effect upon teacher candidates’ future students’ learning. If there is indeed such ineffectiveness, it might be contributed to by weak links between theory (university-based classroom experience) and practice (the practicum experience) (Falkenberg, 2010; Loughran, 2006; MacDonald, 2010; Darling-Hammond, 2005; Russell, 2005; Swennen, Lunenberg, & Korthagen, 2008). When teacher candidates practice their teaching in the absence of theoretical understandings, teaching becomes a set of routine, superficial techniques (Grossman, Hammerness, & McDonald,
Even though Canada enjoys a relatively high PISA ranking -- for example, on the combined reading score only four OECD countries perform better (OECD, 2010) -- teacher education programs are seeking ways to connect theory and practice. To this end, we are conducting a three-year mixed-method study to investigate how Canadian teacher education programs connect and integrate theory and practice. This paper reports the findings of a Canada-wide survey, which was guided (in part) by the following questions:

1) What approaches and strategies are enacted and desired by instructors in Canadian teacher education programs to support teacher candidates in developing practical wisdom and connecting and integrating practical wisdom, theory, and experience?

2) What do teacher educators think about the relationship between theory and practice?

Conceptual Framework. The notion of the theory/practice gap is fundamentally linked to the question of what it means to be a good teacher. If good teaching is primarily seen as enacting good teaching routines, then theory (knowing that) must seem less important for a teacher compared to practical experiences (knowing how). This view is widespread among teacher candidates (Crocker & Dibbon, 2008). If good teaching is seen as putting theory into practice then theory guides "best practices". This is a position often taken by educational administrators (Marzano, Marzano, & Pickering, 2003). If good teaching is seen as enacting practical wisdom (phronesis) or adaptive expertise (Hammerness, Darling-Hammmond, & Bransford, 2005), then knowing that and knowing how need to be connected.

Methods. A survey was administered to tenure/tenure-track, term, and per-course instructors from 40 English Canadian teacher education programs which resulted in 103 instructor respondents from 24 programs. Constant comparison (Strauss & Corbin, 1998) resulted in codes, categories and themes, which will be reported in the paper.

Findings. The following dominant themes emerged.

Approaches and strategies enacted:

i) Most often instructors reported intentionally bringing in authentic and practical learning experiences (21 respondents said this) such as role play, instructor modeling, reflections, presentations, critical questioning, simulated classroom situations, workshops, and assignments based on research. For instance, instructors “make an explicit effort to do activities with students that help them tease out how theory lives in their practice, enabling them to perhaps gain some ability to integrate theory and practice consciously and not by instinct.”

Approaches and strategies desired:

i) Instructors often reported (36 respondents) that there needs to be more coordination and integration of theory (in course-work) and practice (as it lives in schools). For example, one instructor offered, “we should observe our students in their practice teaching and follow up with additional instruction, etc.”

ii) The second most prominent theme (19 respondents) revealed that instructors wanted more professional collaboration between each other and with collaborating teachers. One instructor related, "All instructors need to communicate with one another so that we can build on the theory and/or practice that is being learned in the different components of the program."

Relationship between theory and practice:

i) The relationship between theory and practice was most often (ten respondents)
characterized as a dialectic relationship." For example, one instructor stated, "the art of teaching is the skill at combining (or doing) the theory and practice."

ii) The theory-practice relationship was second most often (five respondents) characterized as theory preceding practice. As noted by one instructor, “Theories are the foundational building blocks that provide a foundation upon which to build an array of strategies and practices in an educational program.”

Conclusions. Instructors are employing various strategies in their classrooms to support a dialectic relationship between theory and practice to make explicit the linkages between theory and practice. Some instructors consider it important to empower teacher candidates to make their own connections between theory and practice. Very few instructors supervise their students during practicum. At the same time, many instructors would like to see a better coordination between on-campus and practicum experiences, where one responds more meaningfully to the other and better collaboration between on-campus instructors and collaborating teachers as well as among on-campus instructors themselves.

Support for this research has been granted by the Social Sciences and Humanities Research Council (Canadian government research body).

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Session number: A11  
Location: Room 3B  
Time: 15.30 – 17.00  

Paper presentations  
Teacher learning in times of change  

Chair: Antonia Aelterman

A11.1 Perceptions of key competencies for innovative teaching of primary and secondary teachers  
Chang Zhu, Frederik Questier and Wei Zhang, Vrije Universiteit Brussels, Belgium

Abstract

Introduction. Teachers are required to teach creatively and innovatively to the next generation for the changing society (Kilicer, 2009). Some research suggests that teachers are lack of competencies for innovative teaching in general (Lin et al. 2009). But what key competencies are needed for teachers to teach innovatively? In the literature, some studies have elaborated on the features or qualities of innovative teachers, but there is a lack of general framework on what are the key competencies of teachers in order to be innovative in teaching.

Understanding of the various capabilities, knowledge, skills, belief systems, and attitudes that define an innovative teacher serves as the basis for fostering innovative teaching behavior and teacher development (Koster et al., 2005, Sahin & Thompson, 2006). Through reviewing and synthesizing the relevant literature, the following four key competencies are identified as important for teachers’ innovative teaching. (A) Learning competency. The ability to learn is important in any environment (Sternberg, 1997). Research results indicate learning competency is very important for innovation (Chen, 2002). Teachers’ willingness to learn is a crucial factor for implementing educational innovations (Konings et al, 2007; Zhu et al. 2010). (B) Social competency. An innovative teacher needs to be open and be able to act cooperatively in a group to work together with other shareholders in the school. An innovative teacher should have effective communication skills to work together with others to help innovation in the teaching processes (Koster et al., 2005). (C) Educational competency. In order to make education more effective, educational competencies are
required by teachers, which include innovative educational beliefs, educational and expertise knowledge, psychology in learning, and instructional design (Ozde Sahin Izmirli, Kurt, 2009). An innovative teacher can utilize innovative educational concepts, innovative educational teaching strategies and methods to guide students learning innovatively (Bi, 2003; Cowen, 2002). (D) Technological competency. In the current society, technological competency is crucial for successful innovative performance (Hannon, 2008). Educational technology can enable the use of simulation in education. The ability to integrate information coming from multiple sources, and the ability to effectively use this information in the digital society is also critical (Segers & Verhoeven, 2009). Next to the competences of teachers, the environment context is also influential for the innovation performances (Harris, 2002; Sternberg & Lubart, 1991). In this study, we examine three school environment factors: leadership support, collegial support and administrative support. The study is conducted in Flanders, Belgium.

The main research questions of the research are 1) what are the views of primary and secondary teachers regarding the four core competences for innovative teaching? 2) are there differences between teacher groups regarding their perceptions? 3) do school environment factors influence teacher perceptions of the core competencies?

Method. A questionnaire on Innovative Teaching Competencies of primary and secondary teachers (ITC) was developed and administered online to Flemish primary and secondary teachers who are included in the database of a teacher education programme of a Flemish university. The 6-point Likert-scale was used to collect responses of teachers to the items. In total 39 items were included reflecting four factors: learning competency (LC), social competency (SC), educational competency (EC) and technological competency (TC). As to the environmental factors (leadership support, collegial support and administrative support), 10 items were included. In addition, teachers’ background information was collected, including gender, teaching experience, teaching grade, teaching subject and educational level. In total, 777 teachers from 74 schools in Brussels and Flanders (Dutch speaking community of Belgium) participated in this study. Among them, 443 were secondary teachers and the rest were primary teachers. 75.9% of the participants were female teachers.

Results. The results show that teachers with different years of teaching experiences did not differ in their perceptions of LC and SC. However, younger teachers with less than 5 years of teaching experience clearly had a higher perception of TC compared to the elder teachers (p<.01). ANOVA tests show that primary teachers had a higher perception of LC, SC, and EC compared to secondary teachers. There were no significant differences between primary and secondary teachers regarding perceptions of TC (p>.05). Female teachers had a higher perception of LC, SC and EC, while male teachers had a higher perception of TC. Multiple regression analyses show that leadership support was significantly related to teachers’ perception of LC (p<.01), SC (p<.001) and EC (p<.001). Collegial support was significantly related to teachers’ perception of SC (p<.01) and EC (p<.05). The impact of administrative support was not significant on any of the four perceived competencies (p>.05). The implications of the findings are discussed.
A11.2 Towards excellence of teachers and teacher education

Tara Ratnam, Freelance Teacher Educator, India and Nandini Prakash, Indian Institute of Montessori Studies, India

Abstract

Though the question of ‘excellence of teachers and teacher education’ is not new, it acquires special significance in an age of increasing globalization and its fall out in terms of social change and multiculturalism. In the field of education, this societal change signals a parallel change in the teacher to be able to equip diverse students with skills and competence necessary to keep in step with the changing times and needs. However, the reality of teaching points to something else. It throws up a paradoxical issue for teacher education to grapple with, viz., teachers’ reluctance to change in a changing society (Hoban, 2002) that places new demands on them. In this context, the question of teacher learning and change assumes primary importance. It foregrounds an important dimension of how we conceptualize excellence of teachers and teacher education. It is the ability of the teacher educator to promote in the teacher the disposition to be flexible and accommodate change in his/her thinking and practice in response to the changing expectations.

What constrains teacher change? What is the nature of support that can promote teacher learning and change? Situational responses to these questions can usefully contribute to the larger professional dialogue on the issue of designing teacher education in ways that can facilitate the development of excellence in teachers. Our study purports to do just that by addressing the seminal questions pertaining to teachers, teaching and teacher education raised above. The context for this study is a curriculum reform at the elementary level of education in Karnataka, India, where both authors are involved in different capacities: Nandini is a teacher Resource Person helping elementary teachers adopt a Montessori approach and Tara is a mentor to Nandini in jointly investigating into her practical interventions. Both are united by a common interest in effecting genuine change that can reflect in increased autonomy in teachers and learners.

In India, with universalization of education, schools include learners from diverse socioeconomic and cultural background. However, the struggle to provide an inclusive and relevant educational experience to these children still seems a big challenge. The short term training programs organized for teachers don’t seem to influence their entrenched beliefs nor provide the scope to develop new competencies to take back to classroom. As a result teachers remain where they are nullifying, in turn, top down efforts to introduce innovation. Our study, on the other hand, seeks to establish an organic link between curriculum reform and teacher change. Teachers are not outsiders implementing the given curriculum, but insider participants with opportunities to actively enhance their professional development and agentive role in the reform process. The study is informed by Vygotsky’s Cultural Historical perspective. Vygotsky (1978) sees learning as a social process mediated by the surrounding cultural world. In this embedded world of the individual in the social, the most salient attribute of individuals’ everyday situation is the ‘persistent constraint to act’ (Stetsenko, 2009). This perspective offers a framework to gain a comprehensive understanding of the ethnography of teachers’ work, the resources and constraints that mediate their thinking, being and becoming. The data for this study are
drawn from an ongoing reform initiative in seven elementary schools in Karnataka, all profiling socioeconomically disadvantaged learners. For the limits of this study, we use data from one of the schools between 2010 and 2013. It enables us to capture the social and institutional constraints to change in this school in a situated manner. This qualitative study is ethnographically oriented. The sources of data for this study are audio recording of interviews of teachers, facilitators, parents, school administrators and exchanges between researchers; photographs, transcripts of video and audio recording of classes, training sessions; samples of childrens’ work, documents, and the ecology of the schools captured in Field Notes. Data are analyzed using an analytic induction approach. The early findings of the study showed teachers gaining confidence in the children’s ability to self regulate and learning gradually to let go of their control to allow more freedom to children. However, teachers seem to regress when faced with fresh challenges that daunt them. The data also shows how contextual constraints and resources drive development in different ways, not just of the teachers, but also of the social situation of curriculum reform initiative itself. While the socio curricular dynamics opened opportunities for curriculum reform and teacher learning in the first year of the program, things took a different turn owing to developing sociocurricular constraints. The paper analyses this curricular case to highlight the importance of taking into account the mediation of the reality of the teachers’ context in which their teaching is embedded. Meaningful support to teacher begs an understanding of this dialectical flow between the developing teacher and the developing socio curricular context of his/her work.

A11.3 Developing capabilities in a changing world: Perspectives of primary school teachers in Serbia
Rada Jancic, University of Bielefeld, Germany

Abstract
Teaching in a transitional society characterized by uncertainty of values is a challenging venture. Present study was conducted with teachers working in Serbia, country that is continuously facing changes in various aspects of private and public life in past two decades. Diversification of values and continuous reforms in primary and secondary education introducing decentralization (Radó, 2010), transition from Didaktik to curriculum culture (Pantić & Wubbels, 2012) are just some of them. The changes also affected the perception of teacher’s professional role and its upbring aspect. Presented findings are part of the doctoral research project that uses capability approach (henceforth CA) as theoretical framework for understanding just education while investigating teachers’ subjective theories related to the moments of teacher-pupil interaction.
The aim of this paper is to discuss how teachers enhance or hinder development of pupils’ capabilities in the process of teacher-pupil interaction by presenting some of the approaches they apply. These findings also point out to some possible implications on teacher education programs. In CA research, education is perceived as a capability in itself and also basis for development of other capabilities, while the term capability has a broad meaning and it refers to what one person is able to do and be - what person’s real freedoms are (Nussbaum, 2000).
In order to operationalize this up-bringing aspect of teaching profession, the normative
framework is supplemented by the phenomenology of capable human being of Paul Ricoeur (Honerød Hoveid & Hoveid, 2009; Ricoeur, 2005, 2006). Ricoeur considered ‘capability to say’, ‘capability to act’ and ‘capability to tell’ to be the basic capabilities that lead to ‘capability of imputation’, i.e. a capacity of the person to be responsible for his or her own action. Translated to classroom based activities, these capabilities assume that in teacher-pupil interaction pupils have capacity to speak and be identified by their own name, capacity to initiate actions and capacity to narrate their personal lives.

This theoretical framework was used as a basis for identification of moments of teacher-pupil interaction, where teachers’ were supporting or hindering development of pupils’ capabilities in Ricoeurian sense. Methodological approach is based upon interpretivist paradigm and employed qualitative methods such as: semi-structured interview with teachers; observation of the classrooms interaction; video-recording of the lessons; and video-stimulated recall interviews. Pilot study was conducted with two, and main study with three primary school teachers in Serbia, collecting all together 29 interviews, 23 video-recorded lesson and extensive filed notes gathered during observation period. Coding and categorizing of data was done with the support of Atlas.ti software for qualitative data analysis. The findings suggest that, in an attempt to balance inherent dialectic of up-bringing and educating in the everyday classroom life, teachers use approaches that are based on intuition and depended on the improvisation skills. In order to support development of Ricoeurian capabilities the two most distinctive approaches are: a) passive approach in the form of opportunism – teachers grasping opportunity to put forward the up-bringing agenda into their teaching; b) active approach in the form of seeking flexibility – being flexible in the lessons schedule or within the subjects. However, it was reflected mostly in art subjects and rarely among core curriculum subjects such as literacy, math and science. In these cases, opportunistic approach prevailed. It is argued that teachers express uncertainty in balancing their new roles of instrumentalist that need to be achievement-driven on one hand and traditionally embedded up-bringing role on the other hand. Some activities caused by the imbalance produce moments of teacher-pupil interaction that might have hindering affect on development of capabilities in Ricoeurian sense. Supporting teachers by informing them of more strategic-driven approaches could contribute to easier balancing of new roles.

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<td><strong>Chair: Katrien Struyven</strong></td>
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<td><strong>A12.1</strong> <strong>Primary school teachers’ beliefs about public accountability and external assessment programs</strong></td>
<td><strong>Shukri Sanber and Jude Butcher, Australian Catholic University, Australia</strong></td>
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<td><strong>Abstract</strong></td>
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<td>External assessment programs serve public accountability systems. They reflect the concern of the society to ensure that schools and school systems deliver optimum environments for students to learn and grow. Excellence of teachers and teacher education are core targets of this concern. Public policies often seek to involve teachers as stakeholders in public accountability systems. Therefore it is vital to understand teachers’</td>
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beliefs about public accountability particularly in relation to the assessment of students’ performance in their specific curriculum areas. Traditionally, external assessment programs have concentrated on literacy and numeracy. Recently, the scope of these programs has included other curriculum areas such as science, computing and religious education.

This study examines primary teachers’ beliefs about assessment in religious education. In particular, it examines the relationship between teachers’ beliefs about public accountability and their reported assessment practices in religious education. The study incorporates the responses of 239 primary school teachers to a survey on the use of external assessment as a means for public accountability. Teachers’ beliefs about public accountability are measured through a set of survey items that have loaded on two factors. The first factor represents the construct that external assessment serves teachers' accountability while the second factor represents the construct that external assessment serves school systems' accountability.

The survey helped also in exploring teachers’ assessment practices in religious education. The major finding of this study is that teachers who view religious education as an academic school subject that is formally assessed tend to hold the view that external assessment is a means for providing them, as teachers, with evidence of the levels of students’ achievement of the targeted outcomes. On the other hand teachers who take the view that the nature of religious education is not compatible with formal assessment tend to believe that external assessment programs provide evidence of the public accountability of school systems rather than the individual teachers.

A12.2 Teachers' constructs about pupils
Hanne Touw, Paulien Meijer and Theo Wubbels, Utrecht University, The Netherlands

Abstract
In this study, we assume that teachers’ opinions about their pupils influence the way they interact with them. We also assume that their thoughts and ideas about pupils - their personal constructs (Kelly, 1955) - are mainly unconscious: "Unless they are made explicit, you won’t know why you are doing what you are doing" (Knowless, 1979, p.100). Personal constructs are formed by one’s professional and personal history. The aim of this study was to gain insight in the constructs teachers and student teachers in primary and special education have about their pupils. We developed a coding system with 8 categories for analyzing Personal Constructs from teachers about their pupils and investigated the constructs of 22 student teachers and 25 special education teachers. Teachers in our study most often used constructs that describe a pupil's individuality ('personal' constructs) and constructs about a pupil's working attitude and task behavior ('moral' constructs) and least frequently they used constructs about the way pupils think, the things pupils find meaningful and useful ('existential' constructs). Interestingly, constructs that refer to a pupil's cognitive and intellectual functioning and school achievement were not as important for teachers as we had expected and we will elaborate this in the paper.

Finally, the results of this study show that teachers at special schools formulated significant more constructs about of the individuality of a pupil ('personal' constructs). Reasons for this difference are explored in the paper.
**A12.3 Expanding the pedagogical horizons of developing teachers: A new professional experience approach**  
Wendy Moran, Marie Quinn and David Lee, Australian Catholic University, Australia

**Abstract**  
The socialisation of teachers, according to Lortie (1975), features limits that can directly impact upon the development of teachers. One such limit is that future teachers frequently enter university with an established set of beliefs about teaching derived from the experiences of being a student where they have rarely been privy to the thoughts, plans and decisions of teachers. Subsequently, their initial socialisation may originate with an apprenticeship of observation developed during their own schooling. Lortie also claims that teacher training professional experiences typically feature a single supervising teacher whose workload is rarely reduced to allow time to develop the student teacher, and whose modelling of teaching is not necessarily accompanied by an explanation of underlying rationale. The result is that the “practice teaching arrangement does not offset the unreflective nature of prior socialisation; the student teacher is not forced to compare, analyse, and select from diverse possibilities” (p. 71). In today’s society where shared knowledge, culture and identities are of great importance, issues of teacher socialisation must be addressed during teacher preparation. Traditional professional experiences should be supplemented to give student teachers the chance to dialogue with expert teachers who have the time to, and are able to articulate their decisions, work and challenges and can offer quality classroom experiences. Employing a critical reflection approach, an Australian university has diversified professional experiences to give developing teachers opportunity to consider educational communities who have explored new and innovative pedagogies to meet the needs of their students. In a program called School Innovation Rounds (SIRs) groups of 2nd Year Bachelor of Education (Primary) students (approximately 35 – 40 students in each group) visit selected schools across three Tuesdays (visits consisted of 2 ½ hours duration each) to gain insight into key questions such as: What is good pedagogy? What are the risks for school principals and their teachers when they invest time, money and effort in new innovations? What qualities and skills do school leaders need in their teachers when initiating change? The visit comprises a 30-45 minute presentation from key staff at the school about the needs of their school students, the process of researching and deciding upon a particular approach, and its implementation. The presentation is followed by hour-long classroom observations in which small groups of student teachers rotate through two to three classrooms. The visit is brought to a close by gathering together again for further questions and discussion about the innovation. School Innovation Rounds (SIRs) also adopts a number of the strategies promoted in Instructional Rounds in Education by City, Elman, Fiorman & Teitel (2009) – a community of practice model inspired by the medical rounds used by physicians. In particular, SIRs feature the use of the observational method from City, et al. (2009) where the observer documents detailed description about the learning rather than making judgments about the teacher or the teaching process. The emphasis is on the evidence of learning to encourage student teachers to concentrate on the ways in which well considered pedagogical decisions impact on the quality of learning. A participatory action research approach necessitated the collection of online surveys in 2011 and 2012 from both student teachers and school
leaders in order to explore the program effectiveness. The survey data predominantly produced quantitative statistics that were analysed in terms of the extent to which preservice teachers were able to recognize, value and reflect upon the cognitive and collaborative challenges of pedagogical innovations for teachers. An optional comments section facilitated opportunity for participants to make suggestions about the program triggering modifications to the program for subsequent years. Field notes and emails from lecturing staff involved in the program contributed to an exploration of the SIRs’ strengths and challenges. Results to date from the school leaders and staff involved have been very positive and suggest that this program has been helpful in validating their work and in encouraging them to articulate and reflect on their decisions. The student teacher responses indicate very clearly that the program has introduced them to: a) ideas and strategies previously unknown to them (and would now like to try), b) the importance of critical observational and reflective skills in making effective decisions for student learning, and c) the elements of ‘good’ pedagogy. Such a professional experience program expands the initial socialization of developing teachers, inspiring them to think creatively about their own practice, providing opportunity for shared discourse about good pedagogy, and assisting school personnel to articulate and reflect upon their own practice.

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**A13.1 The influence of a science education M. Ed. Program on teachers’ professional development**

Ricardo Trumper, University of Haifa, Israel and Osnat Eldar, Oranim Academic College of Education, Israel

**Abstract**

One of the most difficult challenges in science education is to design professional development programs for teachers, which can lead to fundamental changes in their practice, e.g., to become more learner-centered. The Science Education M. Ed. Program in Oranim College was planned with a constructivist philosophy and tries to do that. The participants are 83 science high school teachers (23 in first year, 27 in second and 33 in third). They study 24 hours courses during two years, 13 of them common to all the disciplines, and write an applied final work in third year.

We are carrying out a study whose purpose is to analyze if, and how, the Program influences the student teachers' methods and ways of teaching towards a constructivist approach. Twelve students participate in the study (8 women and 4 men; 5 biology, 5 mathematics and 2 physics teachers; 7 Hebrew and 5 Arab speaking). In their first semester they were all interviewed, asking them mainly what they know about their students' prior knowledge and to which extent they encourage students' active learning. For example, when speaking about their pupils' prior knowledge, students said: "I should know what they know because I know what they have studied previously"; "If they studied about batteries and resistors in the past, I can teach them more complicated circuits"; "I don't look for what they know, I have no time, it is very heterogeneous, I have to let them have some common and needed basis"; "With pupils I have taught, I know what they know. If
they are new, I begin teaching according to the curriculum and if I feel there are some deficiencies I try to fix it”. Afterwards the researchers observed students in their classrooms and rated their teaching according to the Reformed Teaching Observation Protocol (Sawada et al., 2002), comprising 25 items dealing with "Lesson Design and Implementation", "Propositional and Procedural Knowledge", and "Classroom Culture" with a 5 point Likert scale (0-4), which was designed to evaluate inquiry based and student centered mathematics and science classrooms. Students got a low rating of 37.3 out of 100 with a SD of 11.3, indicating that most of them were teacher-centered.

In second year, they were interviewed and observed once again. In the interviews they indicated which courses influenced them on their teaching, and how, but they also talked about factors that constrain change. The students’ RTOP marks increased notably up to 52.0 with a SD of 15.2, with five students getting a mark greater than 50 (considerable presence of student-centered teaching).

A13.2 Pedagogical knowledge at the end of university teacher education: Are there differences between traditional and modernized study programs?

Ewald Terhart, University of Muenster, Germany

Abstract

In Germany teacher education is split up in two phase: The university phase (5 years) is followed by a preparation phase (1.5 - 2 years). During teacher education at the university about 15% to 20% of the complete studies of a teacher student are devoted to pedagogical knowledge. This element in university teacher education is called “Bildungswissenschaften”. The lectures and seminars in Bildungswissenschaften are delivered by personnel from education science (pedagogy), educational psychology, sociology of education, and – in some cases – philosophy and political sciences.

A research group from several German universities is running a project (BilWiss) on the substance of this part of teacher education, on its results at the end of the university phase, and on its influence on the further development of professional competencies of teachers during the second preparation phase and in the first years of service (longitudinal design). The research has been done in the German Bundesland Nordrhein-Westfalen (NRW) with ten universities having teacher education programs Five of these universities still had the traditional structure of teacher education (one final examination by a state agency, no modularization). The other five had already installed teacher education programs according to the Bologna-System (Master of Education, modularization, credit points etc.). In spring 2011 the pedagogical knowledge of about 3.200 graduates of university teacher education was tested at the beginning of the second phase. The research group was interested in (1) the influence of certain personal preconditions of the students and (2) interested in the influence of different learning opportunities (traditional vs modern study programs, regular vs non-regular certification). It can be shown that there are only very small (not significant) differences in the pedagogical knowledge of future teachers from different universities. A non-regular certification is combined with a lower level of pedagogical knowledge. There is no significant difference between the graduates from traditional programs (Staatsexamen) and modernized programs (Master of Education). But Masters of Education have a more positive view on their pedagogical studies than graduates of traditional study programs. - Next step is to analyze the influence
A14.1 **Professional development for “professional pedagogues”: Contradictions and tensions in re-professionalising teachers in Cyprus**  
Stavroula Philippou, University of Cyprus, Cyprus; Eleni Theodorou, European University Cyprus, Cyprus and Stavroula Kontovourki, University of Cyprus, Cyprus

**Abstract**

Problem Statement and Research Purpose. This paper presents the ways elementary school teachers positioned themselves within the curriculum change process that was initiated by the Ministry of Education and Culture (MoEC) of the Republic of Cyprus as part of the comprehensive reform of the Greek-Cypriot educational system. This process was launched in 2004, with the identification—among many others—of the need for teachers’ positioning as “professional pedagogues,” and culminated in the introduction of new curricula across subject areas and mandatory education levels in 2010. Central in the introduction of new curricula was the organization by the MoEC of professional development seminars (December 2010-January 2011), which communicated to teachers that new curricular demands necessarily required and increased professionalism on behalf of the latter. The purpose of this paper is to explore the ways teachers perceived their (re)positioning as professionals as related to their notions of efficient professional development during curriculum change.

Conceptual and Methodological Framework. This investigation draws on theoretical and analytical tools from the sociology of teacher professionalism and curriculum reform, as well as post-structural approaches to teacher agency/autonomy. From these perspectives, teacher professionalism and autonomy are approached as social constructs that are constantly in flux and under negotiation within broader socio-historical, political and institutional structures (e.g., Goodson, 2007; Mockler, 2005). While there is abundant agreement that teachers have been de-professionalized and had their autonomy constrained over the past few decades (e.g., Beck, 2008; Evans, 2008; Priestley, Edwards, Priestley, & Miller, 2012), researchers have also pointed to teachers as the carriers of change and, thus, as potentially in position to actively shape their work-lives and redefine agency within structures (e.g., Hiferty, 2008; Vongalis – Macrow, 2007). This suggests that teachers’ positioning during curriculum change should be seen as a contingently complex process that necessitates that both the context and the individual are simultaneously considered. It is this perspective that we take as we explore teachers’ perceptions on professional development practices – experienced and desired.

This investigation was made possible through individual and focus group interviews, which were conducted immediately after the aforementioned professional development seminars (February – March 2011) and elicited the perceptions of 66 teachers regarding the purpose, process, and participation in their professional development and the
curricular change in general. Thematic analysis of teachers’ perceptions on professional development built on previous findings of the project that revealed (a) teachers’ positioning onto different points on a continuum, ranging from positions with none to full perceived agency (Authors, 2012a); and (b) a plethora of constructs and definitions of expertise mobilized by teachers (Authors, 2012b). Findings and Conclusion. Issues of positioning and expertise are also central in teachers’ perceptions of the process and of their participation in professional development, which constitutes the focus of this presentation. The professional development seminars provided by the Ministry of Education and Culture were largely criticized by teachers. The negative points they highlighted were the perceived lack of expertise of the teacher trainers; the large participant size and traditional physical layout of the sessions; the long duration and limited frequency of the sessions; as well as their content, as the latter focused primarily on the presentation of the philosophy of the new official curricula. Based on this critique, as well as on a variety of other positive personal or state-funded professional development opportunities they have had, teachers made several suggestions for alternative kinds of professional development which they thought would be more effective on the conditions that a) this professional development valued their or others’ expertise as experienced practitioners; and, (b) it took a form which allowed time for interaction and participatory reflective-iterative processes of curriculum development which would enable them to have their voices heard. However, teachers also contradicted themselves by requesting ready-made materials or recipes as means to implement the new official curricula, thus implicitly requesting forms of professional development with strong elements of guidance which would threaten their autonomy. Such desires were expressed in relation to specific subjects, particularly language and math, and echoed the hierarchisation of the curriculum which was reflected in the professional development structure and emphases put forth by the Ministry. Teachers’ critique against the provided professional development seminars as ‘too theoretical’ also pointed towards a perceived incompatibility between theory and practice which undermines their claimed expertise. Teachers’ positions amidst the provided professional development are presented and discussed vis-à-vis the complexities of conceptualizing teacher professionals as autonomous in a historically centralized educational system, within the framework of providing professional development for excellence in times of curriculum change.


Abstract
In this paper we present a cross-contextual analysis exploring how the lacking use of specialized languages as shared tools of communication among teachers, student teachers and pupils affects reasoning and learning. Our analysis is based on three separate studies; one among pupils in upper secondary school discussing literary texts (Roednes 2009, 2011); the second among teacher students discussing pedagogy (Fosse 2011); and the third among experienced teachers discussing reading instruction (Brevik in progress). The three
studies show that when discussing subject matter, the participants in these situated interactions rely on everyday language. The aim of this paper is to analyze and discuss the findings in the three studies. In the discussion we draw on sociocultural, dialogical perspectives on learning and studies of teacher professionalism.

Study 1 (Roednes 2009, 2011) shows a group of pupils discussing a canonical novel. The data is from a two-month field study of a 2nd year class in upper secondary school (16-18 year olds). Findings show that the pupils, when discussing literary texts, relate to their own experiences using everyday language. Their contextualized interaction rooted in experience and everyday language, hinders an investigation of the texts through analytical approach; the kind they meet when later asked to write text analyses.

Study 2 (Fosse 2011) shows a group of student teachers discussing pedagogy. The data is part of an extensive study of student teachers’ interaction in a one-year teacher education program at the University of Oslo. The focus is on how student teachers make meaning when cooperating on tasks concerning pupils’ learning. Findings show that the student teachers make meaning of theoretical concepts by using everyday language as their most important tool. The study implies that they struggle to articulate their theoretical understanding, and use everyday language in the absence of a more specialized language to describe how theories make sense to them.

Study 3 (Brevik in progress) is based on data collected from 25 upper secondary teachers at 14 schools in a Norwegian county. Findings show that while teachers in an initial group interview said they don’t use reading strategies in their instruction, documents written by the teachers after having agreed upon a set of terminology show otherwise. Sharing a specialized language when describing reading instruction helped the teachers express and share their practices. When they did not share a professional language as a common tool they were unable to express what they did in their reading instruction. The study suggests that their use of everyday language limited their professional development. The professional language functioned as a thinking tool as well as a tool of communication and professionalization.

Our cross-contextual analysis of the three studies suggests a lacking use of specific concepts and specialized language in educational interactions among pupils, among teacher students and among teachers. Based on these findings we first discuss how the use of everyday language influences reasoning and learning. Second, we discuss whether the lack of specialized language might reduce the development of teacher professionalism.

We base our discussion on sociocultural, dialogical perspectives on language and learning, and on studies of language related to teacher professionalism. We consider language a central tool for learning and argue that understanding teacher professionalism involves understanding teachers’ language practices (Afdal & Nerland 2012, Edwards & Daniels 2012, Horn & Little 2010). We draw a broad distinction between on the one hand contextualized everyday language practices and on the other hand decontextualized specialized or scientific language practices (Bakhtin 1986; Linell 1992, 1998, 2009; Vygotsky 2001; Wertsch 1991; Wells 1999). Immanent in these language practices are different ways of making meaning and relating to topics that will affect reasoning. The empirical studies show how the lacking use of a specific language limits the reasoning, and thus the potential for learning. We argue that teacher professionalism involves knowledge of specialized languages, the ability to use these languages and to adapt these
languages to different educational contexts. These findings suggest a need for teachers to focus the use of relevant concepts and specialized language forms on all levels; with pupils in the classroom, among students in teacher education and among practicing teachers. In addition to providing tools for learning, the use of specialized languages is a way for teachers to make visible their knowledge in educational practice; their professionalism.

<table>
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<tr>
<th>A14.3 Barriers to the professionalism of teachers in the USA</th>
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<td>Mary Bair and David Bair, Grand Valley State University, United States</td>
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</table>

**Abstract**

Problem statement. The context for the teaching profession has shifted dramatically over time. Although the attributes of learned professions are knowledge, autonomy, and service (Sexton, 2007), what distinguishes a profession is not “autonomy of individual conduct, but the collective establishment of widely recognized rules of good service and standards for admission to practice” (Kerchner & Caufman, 1995, p. 108); characteristics that Hoyle (1980) refers to as extended professionalism. Many teachers in the USA equate professionalism with behaviors such as politeness, punctuality, and appearance, what Hoyle (1980) calls restricted professionalism. In order to respond to this “trivialization of teacher professionalism” (Raymond, 2006, p. 31), we need to understand the notions of teacher professionalism throughout American history. In this paper we draw upon Hoyle’s (1988) definition of professionalism and Hargreaves’ (2000) framework regarding the historical phases of professionalism to explain how teacher isolation has resulted in a restricted notion of teacher professionalism in the USA. We recommend collaboration as a way to counter forces which diminish excellence in educational practice and threaten to undermine teacher professionalism.

**Conceptual framework.** This analysis draws upon critical theory (Horkheimer, 2002) as a means to explain and understand teachers’ current condition of professional alienation, and also promote conditions for change. Social and governmental forces create challenges to teacher autonomy that have reduced the productive force of teachers. Critical theory can illuminate a path toward increased teacher professionalism.

**Analysis and findings.** For much of the nineteenth century, no formal preparation was required for American teachers. In this “pre-professional age” (Hargraves, 2000, p. 153), teaching was considered a technically simple task, learned through apprenticeship (Labaree, 2008). Physical isolation in one-room school houses prevented teachers from developing a common professional identity. The rapid growth of the primary schools in American during the 1830s brought a corresponding demand for standardized teacher preparation. This led to the emergence of normal schools, which later developed into state teacher colleges and then into regional state universities. In order to produce large numbers of teachers these institutions “relaxed professional standards for teacher preparation, . . . making teacher education easy to enter, short in duration, [and] modest in academic rigor” (Labaree, 2008, p. 297). This practice has continued to the present day where US policymakers seem to “want to raise the bar on learning by lowering the bar on teaching!” (Hargreaves & Shirley, 2009, p. 89).

The mid-twentieth century saw demands for teacher autonomy. Teachers felt that, as professionals, they had the right and responsibility to select materials and methods they deemed best for their students (Flinders, 1988; Hargreaves, 2000). This era of
“autonomous professionalism” led to ad hoc solutions rather than a common set of norms and skills that were used by a community of practitioners (Hargreaves, 2000, p. 158). Teachers were isolated from the community and one another.

Teacher isolation from knowledge has been a persistent problem (Goodlad, Soder, & Sirotnik, 1990). When compared with peers in most European and Asian countries, teachers in the USA have fewer opportunities for sustained, collegial professional development (Wei, Darling-Hammond, Richardson, Andree, & Orphanos, 2009). Many American educators prefer information that is experiential, seeking advice from peers rather than scholarly journals.

Currently in the USA, teachers work under the authority of non-educators: local, publicly elected boards control local decision-making; state legislatures control licensure and regulate professional roles; and federal mandates for student achievement compel local schools to further centralize and regularize instructional and pedagogical decisions. This has led to what Hargreaves and Shirley (2009) call “professionalism without power” (p. 91).

In the United States, it seems professionalism has come to mean compliance. In this era of marketization, educators must not lose sight of the fact that teaching is relationship-based work and the notion of caring undergirds the profession (Collinson, Killeavy, & Stephenson, 1999). Research in the fields of nursing and health services caution that “bureaucratic organizational structures can reinforce a form of professionalism that frames caring and collaborative relationships as unprofessional” (Douglas & Gitell, 2012, p. 267).

Conclusion. Teacher professionalism in the USA is at a crossroads. Teachers must re-conceptualize a professionalism that is collegial and collective rather than individual or autonomous. Likewise, teacher educators need to pay attention to the role of the teacher beyond the confines of the school (Sexton, 2007). This may allow American educators to revitalize and sustain their professional character in the eyes of community members, legislators, and policy makers alike, and claim responsibility for their professional behavior rather than be held accountable by others to external standards of practice.
### ISATT INFORMATION SESSIONS

<table>
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<tr>
<th>TTPP session</th>
<th>Location: Room 1B</th>
<th>Time: 17.00 – 18.00</th>
<th>Chair: Christopher Day</th>
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<tr>
<td>Teachers and teaching: Theory and practice (Journal of ISATT)</td>
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<td><strong>In this information session, Christopher Day presents and discusses the standards of writing for an international SSCI rated journal and the processes involved.</strong> The Journal of ISATT, “Teachers and teaching: Theory and practice”, provides an international focal point for the publication of research on teachers and teaching, in particular on teacher thinking. It offers a means of communication and dissemination of completed research and research in progress, whilst also providing a forum for debate between researchers. This unique journal draws together qualitative and quantitative research from different countries and cultures which focus on the social, political and historical contexts of teaching as work. It includes theoretical reflections on the connections between theory and practice in teachers’ work and other research of professional interest.</td>
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<tr>
<th>Location: Auditorium 4</th>
<th>Time: 17.00 – 18.00</th>
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<tr>
<td>ISATT grants, awards and travel bursaries</td>
<td>Chair: Cheryl Craig and Jan Broeckmans</td>
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<tr>
<td><strong>In this information session, the actual Secretary and Treasurer of ISATT present and answer to enquiries about three schemes that are available to ISATT members.</strong> 1) The Collaborative Research Grant programme seeks to support doctoral students or entry level researchers, who partner with a senior researcher who is not one’s current/previous advisor and preferably conducts research in another country, to conduct a shared inquiry over a twelve-month period. 2) The ISATT Awards programme is run biennially, i.e., at the times of the biennial conferences. On nomination, an ISATT ST²AR Award may be granted to senior members who have made significant and exemplary contributions in the international field of teaching and teacher education. Furthermore, there are grants for the Outstanding Dissertation, the Outstanding Book, the Outstanding Article and the Outstanding TTTP Article. 3) The Travel Bursaries scheme offers financial support to research students and faculty for their attendance of biennial of regional conferences of ISATT.</td>
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DISCUSSION ROOMS

Session number: B1  Location: Room 3D  Time: 10.30 – 12.00

Discussion room  Chair: Boris Mets

Supporting the professional development of teacher educators. Dutch and Flemish initiatives
Jo van Den Hauwe, Boris Mets, ELANT, Belgium; Ko Melief, University Utrecht, VELON, The Netherlands and Anke Tichelaar, University Utrecht, The Netherlands

Abstract
In the Netherlands and in Flanders (Belgium), different pathways may lead to the teacher educator profession. For example, a school teacher may become a teacher educator. Sometimes, master students may become teacher educator shortly after graduating. And, sometimes academic researchers redirect their career by becoming a teacher educator. Teacher educators seem to be the only professionals in education for which no institutional education exists (cf. Smith, 2003). In addition, teacher educators have to be multi-faceted, they are expected to take on a number of roles. Taking into account the present diversity in initial situations of teacher educators, both the Dutch and Flemish Associations of Teacher Educators have made different attempts to support teacher educators in their professional development. Recently, the VELOV (Flemisch Association of Teacher Educators) published the Flemish teacher educator development profile (VELOV, 2012). It was meant to be a frame of reference for the professional development of teacher educators in Flanders. While providing an overview of the knowledge, skills and attitudes that a teacher educator needs in order to be able to function effectively, the profile offers teacher educators a frame of reference to discuss implicit or explicit views on what it means to be a teacher educator. Also in the Netherlands, a frame of reference was developed, the Dutch standard for teacher educators. The development of this standard was initiated by the VELON (Dutch Association of Teacher Educators). The standard has been realized in collaboration with members of the professional group itself (Melief, Rijswijk & Tichelaar, 2012). This standard has two functions: being a guideline to the professional development of teacher educators and being a benchmark for professional registration. It is a standard for moderately experienced teacher educators, because “[…] A standard focusing on quality development is a better guarantor of quality than a standard based on minimal requirements.” (Koster & Dengerink, 2000:3). The standard is combined with an assessment procedure resulting in a certification as a registered teacher educator. More recently, the VELON also designed a formal training programme for teacher educators (cf. Geursen et al., 2012), and developed a “knowledge base” for teacher educators. The knowledge base is a brief encyclopedic overview of 45 key questions related to the teacher educator profession, supplemented with good practices, questions for reflection, and suggestions for further reading.
We like to discuss with participants from other countries, the pros and cons, the opportunities and pitfalls of the Flemish, the Dutch, and possible other initiatives to support the professional development of teacher educators. What are other initiatives to support teacher educators in their professional development taken by colleagues in other countries? How do teacher educators respond to these initiatives? In what way are these helpful to teacher educators’ professional development? Do the Flemish development profile and the Dutch standard allow variety and diversity within the profession or are they inherently homogenizing? Will these kind of instruments in the end only allow masters in educational sciences to become teacher educators? These are
### Session number: B2  Location: Room 2D  Time: 10.30 – 12.00

**Discussion room**  
**Chair:** Farah Dubois-Shaik  

**Teachers as gatekeepers of “inclusion” or “integration” policy**  
Farah Dubois-Shaik, Université Catholique de Louvain, Belgium

**Abstract**  
Recently, in different European countries, student differentiation is being addressed and ‘problematicized’ in different ways and scale in education policy discourses. This in turn triggers a national response which constructs, diffuses and institutionalizes shared ideas of International and national policies of ‘inclusion’ or ‘integration’ to tackle or solve these problematicizations. A main concern is that despite these newer attempts to move away from separating provisions and to introduce ‘inclusive’ or ‘integrative education’, specific national research in different European countries has revealed the persistence of highly differentiating and discriminating institutional mechanisms (Gomolla and Radtkte, 2002, Lanfranchi, 2005, Marks, 2006, Berhanu, 2008) for certain groups of students. Hansen (2011) proposes that the fine lines or limits between inclusion and exclusion of students are actually constructed within classrooms through teacher’s practices and professional self-concepts. This paper proposes the argument that interlinked discourses addressing three strands of student differentiation - ‘disability’ - ‘cultural diversity’ - ‘socio-economic background’ - affect teachers’ professional and institutional practices issuing from dealing with what can be seen as ‘difference’ (Verhoeven, 2011) in distinctive ways. In two case study countries, Belgium and Switzerland, through the lens of the embeddedness in newer ‘inclusion’ or ‘integration policy’, teachers’ and other policy actors’ understanding of ‘difference’ and ‘inclusion’, their interaction and negotiation with each other and their referencing of knowledge is examined. This pertains to a movement of ideas, mobilization and enrolment of actors in translation processes (Callon, 1984) of ‘inclusion’ or ‘integration’. The key argument is how despite and because of various structural delimitations, policy frames and particular policy discourses on ‘difference’, teachers continue to enact in-or exclusion of students through the lens of their own professional self-concepts.

### Session number: B3  Location: Room 3A  Time: 10.30 – 12.00

**Discussion room**  
**Chair:** Brian Fry  

**Using case-based teaching to develop 21st century skills**  
Brian Fry, Indiana Wesleyan University, United States

**Abstract**  
A case is a factual description of a situation that is designed to help students achieve various learning outcomes, or educational objectives. Case-based teaching can be used to develop multiple skills and dispositions, such as: critical thinking, empathy, humility, speaking, writing, creativity, digital literacy, and curiosity. Participants attending this discussion will learn how they can use case-based teaching to instill and develop these much-needed skills in the classroom, on-line, and in blended-learning formats. The presentation and discussion will be content-rich and interactive, with suggestions on how administrators and teachers can use case-based teaching in their classrooms, programs, and schools. The presenter will provide at least seven suggestions that can be immediately applied. After the session, the presenter will send participants a summary of the some of the questions we like to address in the dialogue with our colleagues.
session, including additional resources, links, and references mentioned by the facilitator and the participants.

SYMPOSIA

<table>
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<tr>
<th>Session number: B4</th>
<th>Location: Auditorium 1</th>
<th>Time: 10.30 – 12.00</th>
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<td>Symposium</td>
<td>Chair/organizer(s): Douwe Beijaard</td>
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<td>The role of agency in becoming and being a teacher</td>
<td>Discussant: Brad Olsen</td>
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</table>

Abstract

Structure and agency are two well known concepts. In the domain of teaching and teacher education these concepts refer to the dialectical relationship between teachers’ contexts (structure) on the one hand and the teachers’ intentions to act or position themselves (agency) in these contexts on the other. Agency presupposes that teachers are active professionals who are – at least to some extent – in control over their own professional work and lifes. Nowadays teacher agency implies an important perspective for studying teachers in schools and may have relevant implications for teacher professional development. For example, teachers are nowadays continually confronted with innovations in their schools which may demand of them to negotiate about their professional identity or make decision about the ways in which they wish to position themselves towards an innovation. In general, agency is increasingly seen as an important characteristic of becoming and being a teacher. However, not much research has been done on this professional issue. This symposium addresses this issue in two ways, namely: (1) agency as a professional characteristic of teachers and (2) agency in the context of change or innovation. The first two papers (Auli Toom et al.; Monique van der Heijden et al.) address the first issue, the last two papers (Katja Vähäsantanen; Evelien Ketelaar et al.) address the second one. This symposium intends to contribute to insights into and recommendations about the role of professional agency in teaching and teacher education.

B4.1 Student teachers’ professional agency and its construction during teacher education

Auli Toom, University of Helsinki, Finland; Jukka Husu, University of Turku, Finland and Ulla Karvonen, University of Helsinki, Finland

Abstract

Recent research on student teachers and teacher education suggest the concept and practices of professional agency (Pyhältö et al., 2011; Kumpulainen et al., 2012) as keys to guarantee teachers’ successful and responsible action in professional contexts. Being an active professional agent means perceiving oneself as an intentional expert of pedagogy making decisions and reflecting on the impact of one’s actions. It refers to the development one’s own expertise, especially for pupils’ and for colleagues’ learning. (Sachs, 2003; Turnbull, 2002; Rogoff et al., 1996).

Professional agency is not a fixed individual, but rather a relational characteristic (Greeno, 2006; Lipponen & Kumpulainen, 2011), which is regulated by the dynamics between a teacher and professional environments. A learning environment that offers possibilities to participate and contribute to community (Greeno, 2006) promotes the construction of
professional agency. The development of professional agency should be supported already during teacher education in order to guarantee its continuity in professional practice of teachers. There are some evidence and much demands that pedagogical practices of teacher education should provide adequate opportunities for student teachers to actively participate and engage in pedagogical practices (Lunenberg et al., 2007) and offer an arena to carry out active and responsible authorship (Turnbull, 2002). These challenges have been identified, but little is known empirically about the development of professional agency during teacher education (Zeichner & Conklin, 2010; Toom et al., 2010). Therefore, this study aimed to clarify the various approaches, processes and relative characteristics of the construction of student teacher’s agency during teacher education. The specific research questions were:

1) Which approaches to student teacher’s professional agency in teacher education are presented in the empirical studies on topic?

2) How are these various approaches of student teacher agency integrated and intertwined?

This paper reports on a systematic literature review of empirical research articles focusing on student teachers’ agency during teacher education. The literature search was conducted by using the electronic search engines, which made it possible to search several electronic databases simultaneously. The literature for the theory-based analysis (Conway & Clark, 2003; Fuller & Bown, 1975) was selected, based on several criteria for inclusion, by reading the abstracts of the studies: (1) the studies had to address aspects of teacher education students’ agency; (2) the studies had to use the concept of professional agency as a theoretical concept, not as a political one; and (3) the studies had to measure professional agency empirically. As a result, 29 articles (out of 794) were chosen for final analysis.

The analysis showed that self-related, task-related and context-related approaches (cf. Conway & Clark, 2003; Fuller & Bown, 1975) to student teachers’ agency are emphasised in the studies. The self-related approaches explored personal feelings and emotions, beliefs and values as well as identity as aspects of agency. The task-related approaches focused on the professional knowledge, professional strategies and professional practices as viewpoints of agency. Context-related approaches brought discourse practices, community of practice – cultural resources and curriculum and educational policy into discussion of student teachers’ professional agency. The analysis also showed that these approaches are tightly integrated. The studies highlighted that the pedagogy of teacher education has impact on the construction of professional agency, although its empirical evidence was quite little.

The present empirical research on student teacher’s agency does not focus on considering the relationship between teacher’s professional agency and pupils’ agency that would be highly relevant. It is necessary to study the elements, structures and processes of student teacher’s agency in order to create a relevant basis for future research and understand more profoundly the construction and learning of professional agency even during teacher education.
Identifying teachers as change agents in primary education

Monique van der Heijden, University of Professional Teacher Education ‘De Kempel’, The Netherlands; Douwe Beijaard, Jeannette J.M. Geldens and Herman Popeijus, Eindhoven University of Technology, The Netherlands

Abstract
Research indicates that teachers themselves are key figures in realizing successful changes in education. This implies that teachers must be actively involved in the process of school development. This study focuses on primary school teachers who teach children between four and 12 years old. In the Netherlands the responsibility for school reform and the implementation of educational changes in schools has increasingly shifted to the teachers themselves. It is assumed that teachers carry this responsibility by using their (available) so-called ‘professional space’. However, unknown is whether and to what extent teachers actually do this.

Fullan (1993) states that every school needs teachers who are 'change agents'. Teachers as change agents can be described as "classroom teachers who choose to initiate actions in support of an improvement in teaching and/or student learning beyond their own classrooms" (Lukacs, Horak & Galluzzo, 2011, p. 7). This description, however, goes beyond the fact that a teacher can be a change agent in his/her own classroom. This study focuses on the primary school teacher who develops education on classroom and school level. Empirical research on this role of the primary school teacher is scarce. Therefore, the study reported here focuses on how teachers who are change agents in primary schools can be identified.

To obtain a broad insight in distinguishing, characteristic and distinctive attributes of a teacher as change agent a preliminary study has been conducted. Semi-structured interviews (n=20) were held in three successive phases with: (1) four external experts in change processes, (2) four principals of four selected primary schools, and (3) 12 primary school teachers who play an active role in school development and school reform at these schools. The data were analyzed qualitatively by using ‘open coding’.

Results indicate that primary school teachers as change agents can be identified in terms of dispositions. A disposition is a tendency to act in a certain way based on attitudes (beliefs, motivations and feelings). Ten dispositions were found to identify the teacher as change agent. The dispositions ‘innovative’, ‘eager-to-learn’, ‘inquisitive’, ‘giving guidance’, ‘positive’, ‘and ‘collegial’ were mentioned by all 20 participants. The dispositions ‘committed’, ‘accessible’ and ‘building students’ confidence’ were mentioned by respectively 18, 17, and 14 participants. The disposition ‘responsible’ was mentioned by 12 participants. All teachers mentioned the disposition ‘committed’ and all principals mentioned ‘accessible’. The dispositions are intimately interrelated and mutually reinforcing.

The findings furthermore indicate that the teachers in our study (want to) develop expertise in teaching. They initiate actions to support the improvement of student learning and wellbeing on both classroom and school level, for example by being open for new ideas, experimenting in practice, being inquisitive and being a career-long learner. They stimulate collaboration among and learning with colleagues at school. They have a passion for education and for the teaching profession and they feel involved in education at school.
They are open and friendly to students, colleagues and parents. They feel responsible for and demonstrate ownership of their work as teacher in their own classroom and school. The results of this study will be used for a large-scale questionnaire research on primary school teachers’ as change agents. The results of the current study can be used in the education and guidance of prospective teachers and in the personnel policy purposes and the continuing professional development of teachers in primary schools.

B4.3 An agency-centred approach to educational change and teachers’ identities
Katja Vähäsantanen, University of Jyväskylä, Finland

Abstract
In a rapidly changing and increasingly knowledge-dependent society, educational organisations must continuously develop their practices. Simultaneously, teachers need to engage in continuous professional learning and identity (re)negotiations. This paper seeks to contribute to a detailed understanding of the role of teachers’ agency for educational change and teachers’ identities. Theoretically, agency is understood as being manifested when teachers influence their work and identity, make choices at work, and act accordingly (Hökkä, Eteläpelto & Rasku-Puttonen, 2012; Lasky, 2005; Vähäsantanen & Eteläpelto, 2011). Drawing on this understanding of agency, this paper seeks to elaborate on the manifestations of teachers’ agency and the significance of these manifestations in the context of educational change.

The data for the study included repeated interviews with Finnish vocational teachers (30 interviews in total). The teachers (ten men, six women) were aged 31–57, with teaching experience ranging from 4 to 30 years. They had faced an extensive, externally imposed educational reform involving changes in the curriculum. As a consequence, the students’ learning practices and the content of the teachers’ work had changed. The interview data were analysed mainly via narrative approaches (e.g. Riessman, 2008), together with thematic analysis and qualitative content analysis.

The findings showed that in the context of change, teachers’ agency was manifested in varied ways in terms of making choices regarding their positions towards and their engagements with the reform. The teachers’ positions and activities varied from resistant and reserved to progressive and reformative, based on their individual backgrounds and social resources. Although major changes in education appeared to be achievable when the teachers had minor opportunities to influence the reform due to strong administrative instructions, the practical success of educational change seemed to depend on the nature of these teachers’ agency manifestations. The findings further revealed that in terms of negotiating identity, the teachers’ agency was manifested through activities whose aims ranged from maintenance to transformation. Hence, the continuities and transformations in the teachers’ identities appeared through their active efforts, based on their interpretations of the experiences and emotions they underwent during the reform, rather than from external suggestions.

Overall, the findings suggest that a combination of external regulations and teachers’ weak agency can be effective in initiating large-scale educational change; equally, teachers’ agency emerges as a fundamental element in educational and identity change. An agency-centred approach is thus needed to understand the processes of educational change and the cultivation of teachers’ identities. The paper concludes with a discussion on how those change processes can be promoted sustainably through practical interventions.
Exploring agency as a bridge between teacher and school context
Evelien Ketelaar, LOOK, Open University, The Netherlands and Douwe Beijaard, Eindhoven University of Technology, The Netherlands

Abstract
Research on teachers’ responses to educational innovations is often focussed on either contextual factors or individual teacher features and activities. How these two interact and what happens on the interface between teacher and context is still largely unknown. In this study we aim to bridge this gap between teacher and school context by exploring teachers’ responses to an educational innovation from an agency perspective. We see teacher agency as feeling in control of the choices one makes within one’s work, based upon one’s own goals, interests and motivations (Vähäsantanen et al., 2008). To be able to make their own choices, however, teachers need to experience a certain amount of autonomy and room for negotiation within their school (Coldron & Smith, 1999; Vähäsantanen et al., 2008). Teacher agency is therefore shaped by both the individual teacher and the school context (Lasky, 2005). Although it is often stated that it is important for teachers to experience agency in their work, especially with respect to educational innovations, this was actually rarely the object of investigation (cf. Ketelaar et al., 2012). To contribute to this point, in this study agency was explored with a specific focus on the interface between the individual teacher and the school context.

An in-depth case study approach was used. Eleven teachers participated and data were collected by means of semi-structured interviews, video-stimulated interviews and written learning experiences. The study took place in the context of secondary vocational education in the Netherlands. The specific educational innovation of central focus in this study regarded the changing role of teachers towards a more coaching role in the classroom. By combining the different data sources, general tendencies with regard to agency could be described, supported by more detailed descriptions of several cases.

The results showed that agency in one’s work was experienced in a moderate to high degree by most participating teachers. There were, however, considerable differences between teachers in the way they expressed and used their agency, and in their positioning towards the innovation (i.e., the coaching role). Looking in more detail at some cases, it seemed, for example, that one teacher was more or less facilitated by the school context to use his experience of agency as a means to put up resistance against the implementation of the innovation. Another teacher experienced a high degree of agency in his work, but ended up in a social isolation at his school, as he could not team-up with colleagues. The results suggest that teacher agency with respect to educational innovations can be expressed as an inverted U model, whereby both teacher and school context influence where the optimum for a particular teacher lies.

Session number: B5  Location: Auditorium 4  Time: 10.30 – 12.00  

Symposium  
The work and lives of resilient teachers in times of change  
Chair/organizer(s): Christopher Day  
Discussant: Geert Kelchtermans  

Abstract  
This symposium is about teachers who stay in teaching and continue to give of their best over their
careers regardless of changes in policy, professional and personal circumstances. Using rich illustrations from teachers in primary and secondary schools in Australia, Israel, the USA, the UK and beyond, this symposium discusses the dynamic nature, forms and practices of resilience. Its authors find from extensive research into teachers’ work and lives over the last decade that resilience in teachers is more than the ability to ‘bounce back’ in extreme adverse circumstances. Rather, what counts is ‘everyday resilience’ which enables them to respond positively to the unavoidable uncertainties inherent in their everyday professional lives and through this, sustain their commitment, wellbeing and effectiveness.

B5.1 The role of resilience in teachers’ career long commitment and effectiveness
Christopher Day and Qing Gu, University of Nottingham, United Kingdom

Abstract
Objectives. Drawing upon findings of a national research project on variations in the work and lives of teachers in England, this paper provides empirical evidence which contributes to understandings about the nature and importance of resilience in teachers’ work.

Theoretical Framework. Luthar and Brown’s (2007) critique of the existing research on resilience in adults, together with evidence from research on associations between teachers’ commitment, resilience and effectiveness, provide a useful basis for a nuanced conceptualisation of the dynamic nature of teacher resilience. They suggest that it is inaccurate to imply that resilience in adults is associated with personal attributes only (Luthar and Brown, 2007). This is supported by a range of research which has focussed upon individual values, the role of significant others and leadership in schools. Teacher resilience is also associated with the strength and conviction of their vocation. The ways in which teachers perceived that their capacities to be resilient were influenced not only by their biographies and the strength of their educational values, but also by factors embedded in the socio-cultural and policy contexts of teaching and in different personal, relational and organisational conditions of their work and lives.

Methods. An initial teacher survey in seven local authorities which were nationally and geographically representative assisted in the selection of samples of 100 schools and 300 case study teachers for the study. The research reported here focuses on how teachers interpreted their lived experiences and constructed the meanings of their experiences within the contexts in which they worked. It is thus positioned in the phenomenological research tradition in which the researchers aim to identify the essence of the experiences as related by the research participants (Creswell, 2003) and reveal in detail the ways in which the participants interpret their experiences, construct their worlds and create their meaning (Merriam, 2002).

Data Sources. The construction of teacher case studies, the prime focus of the study, used three main sources of data: interviews, teacher and student questionnaires, and annual student assessment data.

Results and Significance of the Work. What stories of many teachers in the VITEA research show is that resilience is perceived by them as a capacity which is influenced not by one but by different combinations of factors embedded in the individual, relational and organisational conditions in which they work and live. For many teachers who have managed to sustain their commitment and effectiveness in the profession, the ability to function well generally over time in everyday teaching and learning environments as well as
weather the often unpredictable more extreme “storms” of school and classroom life (Patterson and Kelleher, 2005) is not an option, but a necessity. A central task for all concerned with enhancing quality and standards in schools is not only to have a better understanding of what influences teachers’ resilience over the course of a career, but also the means by which the resilience necessary for these to be sustained may be nurtured and developed in the contexts in which they work and live.

B5.2 Developing a framework of conditions that support early career teachers’ resilience
Bruce Johnson and Anna Sullivan, University of South Australia, Australia

Abstract
Objectives. The research reported in this paper aimed to:
- identify the range of circumstances that put early career teachers ‘at risk’ of leaving the profession;
- better understand the dynamic and complex interplay among individual, relational and contextual conditions that operated over time to promote teacher resilience; and
- identify specific policies, practices and resources that best promote early career teacher resilience.

Theoretical framework. We pursued a research agenda that employs emerging social theories of resilience emanating from cross-disciplinary work in sociology, social psychology, cultural studies and education. We undertook this work to better understand how the ‘social construction of teacher resilience acknowledges … the importance of such combinations of personal, professional and situated factors on their capacities to sustain their emotional wellbeing and professional commitment’ (Day & Gu, 2010, p. 158). More importantly, we pursued a socially critical approach to investigating early career teacher resilience to identify and use new opportunities to advocate for fairer and more just ways to support these teachers.

Methods & Data Sources. We recruited 60 graduates who were beginning their teaching careers in two states of Australia. We conducted semi-structured interviews with them at the end of their first term of teaching and again later in the school year. We asked them quite searching questions about their experiences as newly appointed teachers. We used a thematic approach to data analysis.

Results. We found 18 ‘conditions’ – practices, circumstances, situations, processes, and events – that promoted early career teachers’ resilience. We grouped these conditions under five overarching themes to produce a Framework of Conditions Supporting Early Career Teacher Resilience. The five themes were:
- **Systems’ policies and practices**: the officially mandated statements, guidelines, values and prescriptions that impact on beginning teacher wellbeing
- **Teachers’ work**: the complex range of practices, knowledge, relationships and ethical considerations that comprise the role of the teacher
- **School culture**: the values, beliefs, norms, assumptions, behaviours and relationships that characterise the daily rituals of school life
- **Relationships**: the social networks, human connections and sense of belongingness that early career teachers need to successfully adapt to the demands of their profession
- **Teacher identity**: the development of ‘self-understanding’ that enables novice teachers
to maintain a coherent sense of personal identity while learning what it means to ‘be a teacher’ in different contexts and at different times.

We found that there are many positive actions that education systems and school leaders can initiate to build and support early career teacher resilience. Scholarly significance. In this study, we moved the attributional focus away from ‘struggling individual neophytes’ and re-located it within broader contexts that are pliable and amenable to thoughtful and considered interventions by more seasoned and experienced professionals. We are now in a position to offer practical, detailed, and action-oriented advice to systems administrators and school leaders that is likely to make the transition to teaching more successful and less troublesome for the next generation of teachers.

PAPER PRESENTATIONS

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**Abstract**

In England there is a perceived crisis in recruitment for headship positions, coupled with problems with retention in the early years in the teaching profession sometimes attributed to taking on additional responsibilities (Rhodes and Brundrett, 2005; Earley et al, 2009; NCSL, 2006). The policy context around this led nationally to advice and support for schools to succession plan and capacity build (Barnes, 2009; Collarbone and Southworth, 2009; HayGroup, 2007; NCSL, 2006). This situation led to my interest in what English teachers in their early leadership positions experience, in particular how they perceive their development. This is not a peculiarly English phenomenon although, for the factors at play to be understood, it needed to be explored in context. The focus was on those leaders who, in line with the English National College of School Leadership’s leadership framework (NCSL, 2001), were considered ‘emergent’ (those in early leadership positions, including those sometimes referred to as middle leaders or managers). The research literature around these leaders was found to be principally about them, rather than offering their perspective (Bennett et al, 2003).

A study was devised around exploring leadership development through the perspective of professional learning, in particular applying a socio-cultural view of professional learning which viewed learning as identity development. From this perspective identity development was considered to develop through three modes of belonging (Wenger, 1998) and the talk (Sfard and Prusak, 2005) associated with these modes. The research questions were: Who do emergent leaders want to become? and How do emergent leaders talk about their development? This allowed the trajectories of identity development to be charted for five English school leaders from primary, middle and secondary schools in England covering a range of subject backgrounds, ages and including both genders. Leaders participated from
between 13 and 36 months and, after analysis of data generated from an iterative series of interviews (in both life history and life course formats), learning biographies and visual representations of their identity development were generated. The findings of this study were that, even with this small sample of leaders, different senses of ‘becoming’ a leader were offered. Rather than any story of a linear career progression, multiple identities were revealed and the complex development of these identities could be charted. Whilst the overwhelming finding was that identity development was unique for individuals, the five leaders could be divided into those who aspired to become what were termed ‘valued peers’ as opposed to those who were working towards becoming senior leaders. Using Wenger’s modes of belonging (Wenger, 1998) allowed a threefold focus on how leaders imagined what they were aspiring towards, how they were aligning with their work context and how they were engaging in practice in the workplace. The importance of talk, both of self-talk and talk with others, to identity development was evident. The biographical approach was able to reveal the influences on leaders associated with these three modes of belonging, and the significance of their experiences prior to being in their current post, as far back as their childhood.

Most significant was the revelation that what could be termed as ‘identity talk’ was not taking place often in schools, despite the policy context of ‘talent spotting’ and ‘capacity building’. Only two of the leaders had significant others who might be considered as mentors, asking them about their aspirations and helping them to negotiate the demands of their leadership roles. Even these relationships were not set within any clarity about leadership or mentoring roles or how an ‘emergent leader’s’ professional development was connected with their work. This meant that the study itself, with its methodological emphasis on interviews and therefore engaging the participants in identity talk, played a role in the process of identity development.

When the concept of emergence was held up against the empirical data collected in this study, plurality rather than emergence was evidenced. Even the national leadership training programmes the participants had engaged in were being used individually, rather than mediated by their schools. This raises questions as to whether those in schools are aware of and accept such individual development and therefore plurality in what it means to develop as a leader? As well as whether schools in the English education system are set up to support such individual development? More dialogue around leadership development, in the schools themselves, appears to be needed.

B6.2  Teacher leadership: Challenges and possibilities
Maria A. Flores, Eva Fernandes, Ana Forte and Manuel Flores, University of Minho, Portugal

Abstract
Teacher leadership has gained increasing attention from researchers in recent years, especially internationally. While in many contexts terms such as distributed leadership have been used widely in the literature, they also have tended to focus rather on capacity building of heads of departments and other management teams at school (Naylor, Gkolia, & Brundrett, 2006). This reinforces the formal leadership as opposed to informal leadership which may exist regardless of a given role or responsibility at school. Within the view of schools as learning communities, members are encouraged to exercise leadership and to
engage themselves in improvement and change in the settings in which they work. In other words, while there are projects which have focused upon leadership in regard to specific roles and responsibilities (Lieberman & Miller, 2004; Lieberman & Friedrich, 2008; Crowther, 1999), others do see them with some limitations as they tend to depend upon formal role designation linked to existing structures and programs at school. Others (Frost, 2004; Frost & Durrant, 2003; Spillane, 2006) tend to emphasize the informal kind of leadership in which teachers engage in order to enhance their professionalism and to make a difference in their work and in the schools in which they work.

This paper reports on findings from a 3-year research project funded by Fundação para a Ciência e a Tecnologia (National Foundation for Science and Technology) (PTDC/CPE-CED/112164/2009) aimed at examining conditions for teacher leadership in challenging circumstances. The goals of the research project are: i) to understand the wider social, cultural and political setting and the policy environment in which teachers’ work is framed, especially in terms of challenges and opportunities; ii) to analyze the professional and organizational culture and structures of the schools in which teachers work; iii) to understand the ways in which teachers construct their professionalism; iv) to develop strategies in order to enhance teacher leadership in schools. A mixed-method research design was devised.

In this paper, data drawn from the nationwide survey are presented. In total, 2702 teachers from mainland Portugal responded to the questionnaire which was administered online: 78,5% were female teachers; 42,8% were between 40-49 years old; 28,6% were between 50-59 years old and only 1,4% were 60 or more. The participating teachers were teaching in all levels of teaching (from pre-school to secondary school: 3 to 18 year-old students).

Findings from this study shown that teachers’ motivation is moderate (45,5%) although 27,4% admit that their motivation is high and 17,4% low. Interestingly, when asked about issues such as job satisfaction, self-efficacy and motivation over the last three years (during which major reforms in Education and in teaching have been put into place in schools), the majority recognize that their motivation decreased (61,6%) as well as their job satisfaction (45,5%).

As far as aspects of teaching as a profession are concerned, the respondents state that individualism has increased as well as their working time. They also agree that over the last 3 years, there was an increase in bureaucracy in teaching, there is greater control on teachers’ work and there is an increase in public accountability and public criticism of teachers.

When asked about the dimensions of their work that they value most, they refer to collaborating with colleagues (63,4%); supporting students (58,7%); reflecting on one’s own work (51,1%); planning (49,1%) and continuous professional learning (45,1%). As for the ones that teachers tend to value less, accessing didactical materials (27,6%); communicating with parents (25,8%); participating in decision-making process (19,7%); using ICT (19,69%), and developing teamwork (18,7%) emerged from the data.

By and large, ambiguity and ambivalence in teachers’ views and perceptions of both leadership and professionalism emerged from the data which may be linked to two levels in which their discourse may be associated: the rhetoric level – in which the language of policy shapes teachers’ discourse; and the practice – which has to do with what teachers actually do. One might ask therefore about the effective existing conditions for a culture of
leadership, which is to be related to teachers’ own understandings of leadership and their professional identities. Overall, this study provided empirical evidence of the complexity of teacher leadership in context and it highlighted the need to support and sustain teachers’ continuing professional development in the workplace within a view of teachers as lifelong learners and of schools as professional learning communities. These and other issues will be explored further in the paper.

B6.3  Education for the future – An international cooperation programme focused on leadership and transformational learning
Marco Snoek, Hogeschool van Amsterdam, The Netherlands; Frank Bruckel, Pädagogische Hochschule Zurich, Switzerland; Bert van Veldhuizen, Hogeschool van Amsterdam, The Netherlands and Rachel Guerra, Schulamt des Fürstentums Liechtenstein, Liechtenstein

Abstract
Introduction. As teachers are key to enhancing learning in schools, it is essentials that they have access to extensive learning opportunities themselves. These learning opportunities should focus on improving the learning of pupils but also on the extent in which the teacher uses concepts and theories in collaboration with colleagues to improve the curriculum and the design of the learning environment in the school as a whole and to support colleagues in this. This last perspective on transfer is closely related to the leadership role of the teacher.

In their review of teacher leadership research, York-Barr and Duke (2004) define teacher leadership as “the process by which teachers, individually and collectively, influence their colleagues, principals, and other members of school communities to improve teaching and learning practices with the aim of increased student learning and achievement” (pp.287-288). Ross et al. (2011) indicate that developing teacher leadership competences asks for a process of transformative learning (Kegan 2009; Mezirow 2000) in which taken-for-granted frames of references are transformed and new habits of minds are developed.

In an international cooperation, two teacher education institutes from Amsterdam and Zurich and the Department of Education of the Principality of Liechtenstein decided to join forces in providing a joint in-service course for experienced teachers and schoolleaders which stimulates their leadership and offers a learning environment that supports transformative learning.

Design of the joint programme. The joint programme aims at challenging taken-for-granted frames of references in three ways:

- By exposing the participants to educational systems, discussions and solutions in other countries, where different frames of references, values and traditions exist
- By focusing on international trends in society and education to reflect on local issues and to use these as inspirational sources for local innovations (OECD 2010)
- By introducing future thinking and scenario writing as a methodology for designing out-of-the-box solutions (Snoek 2003)

In designing the collaboration programme, we considered principles of effective further training (Lipowsky 2010) combining content, setting (exchange between participants), practice transfer, and expert feedback to provide participants with a deeper understanding of school systems and school change (Brückel & Schildknecht 2011).
The programme is centered around three joint meetings/study visits, supported by local meetings for the separate groups. The course design covers the following elements:

- Introduction to the educational systems in both countries
- Joint meeting (5 days) with school visits and introduction of trends in society and education
- Elaboration of trends in international subgroups
- Joint meeting (5 days) with school visits and introduction of theories on curriculum design and school improvement (Jäger 2004)
- Individual innovation project within the local context
- Final joint meeting (3 days) writing future scenarios

The school visits in partner countries and the study of trends serve as source of inspiration for the participants to initiate small-scale innovation projects within their schools.

The first cohort of the joint programme started in February 2012 and will finish in March 2013. A second cohort will start in February 2013.

Evaluation of the program. The whole programme will be evaluated to gain information about «successful transfer» (Lipowsky, 2010). For that, the evaluation examines two main questions:

- Does the programme meet the aim of challenging existing frames of reference? Do the participants experience the combination of content, setting (exchange between participants), practice transfer, and expert feedback as helpful?
- Do the participants succeed in strengthening their leadership roles (by implementing a small-sized change project in their school)?

Methodology. A formative evaluation will be conducted after each of the 7 modules using interviews and questionnaire data to answer the first question. This will give feedback about the participants’ perception of the effectiveness of the combination of content and setting. In addition, one year after the end of the programme, interviews will be conducted to check the long term effects of the programme.

To answer the second question a separate questionnaire will be used, which will investigate the projects carried out by the participants in their own school.

Findings and Conclusions. The first preliminary findings show that the participants experience the design of the module as highly stimulating. Especially the school visits play a major role in opening up existing mindsets. The participants experience the task to connect and to relate different conceptual levels (international, national local) as challenging but difficult.

Organisational issues (arranging study leave from regular teaching tasks in their schools for the joint meetings) and language barriers can frustrate participation in the joint course.
Opportunities for producing new knowledge and improving students’ education at higher education institutions through self-study methodology

Linda van Laren, University of KwaZulu-Natal, South Africa

Abstract

In South Africa (SA) the potential of students for higher education institutions (HEIs) learning is often gauged by their mathematics achievement in matriculation examinations. The under achievement of South African (SAan) learners has, however, been highly publicised—particularly in Mathematics. Many teachers, teacher educators and academics involved in the teaching of mathematics are reminded of the results of the Trends in International Mathematics and Science Study (2003/4) (Ministry of Education, 2004) where SAan Grade 8 learners were ranked 45 out of 46 countries in standardised mathematics tests. These results caused a flurry of mathematics education research to explore the ‘what, why and how’ of SAan mathematics teaching and learning so that the causes of the poor learner performance could be remedied. In attempting to explain learners’ underachievement, many stakeholders in education were researched and findings presented as knowledge production.

Lagardien (2012, August 10) points out that “the production of new knowledge and innovation are vital for an array of reasons, many of which are well known and generally incontestable. Nonetheless, what can be contested in South Africa today, is the prioritisation of research over education…” He argues that at HEIs in SA, teaching is not valued as much as research and this means that the next generation of academic leaders are neglected because research takes place at the cost of teaching. In other words, our future academic leaders, who include SAan teachers, are neglected because academics are pressured to produce research instead of focusing on teaching students. He poses the following question for urgent consideration: “How can we ensure that new knowledge is produced and that our students get a thorough education?” (Lagardien, 2012, August 10)

In addition to the overemphasis of research in most HEIs, educational research often focuses on trying to find out what other teachers, and sometimes what teacher educators, need to change or improve in their teaching. McNiff and Whitehead (2006) describe three paradigms in which research usually takes place and indicate the positions of the researcher and the researched (often the teacher) in each paradigm. The three paradigms are classified as the Technical, the Interpretive and the Critical Theoretic.

Much educational research, where new knowledge is produced, occurs within the Technical and Interpretive paradigms. The top-down recommendations of knowledge producers working in these two paradigms appear to have limited success in filtering down to practitioners. Often these recommendations rely on practitioners to take up the transformations for changes in the education system. This means that prioritization of research in these paradigms has produced large amounts of new knowledge that has fallen short in ‘making a difference’ to further thorough education for students. In the field of educational research there is a need to conduct research using a ‘bottom-up’ approach where researcher practitioners’ own recommendations can lead to changes that the
researcher practitioner is able to implement within her/his’ Zone of Feasible Innovation (ZFI) (Rogan & Grayson, 2003). However, there appears to be limited research detailing the use of self-study in mathematics teacher education to illustrate how practitioner research can produce pragmatic knowledge without compromising students’ education. The purpose of this study was to explore self-study methodology (Bullough & Pinnegar, 2001; Loughran, 2007) to contribute to educational professional development. The main research questions that guided this study were: 1. How can self-study methodology, in teacher education, facilitate production of new knowledge to improve the practice of teacher educators? 2. How can I, a SAan mathematics teacher educator, use self-study methodology for production of new knowledge to improve my practice?

Self-study methodology is a form of practitioner enquiry that has much in common with practitioner research classified as reflective practice, action research, teacher research and critical pedagogy. Self-study is usually situated in the Critical Theoretic paradigm where the researcher practitioner acknowledges that the research is used for a specific purpose. Self-study operates as a phenomenon because it is based on reflexive practice and as a method for documentation of social action.

Often self-study allows for social action through addressing educational issues but the process of self-study also facilitates practitioner change. Possibilities for ‘organic transformation’, through self-study methodology, allow for reframing, restructuring, revitalizing and renewing (Gouillart & Kelly, 1995).

When studying her/his own practice, using self-study methodology, and through seeking ways of making a difference that the practitioner sees as important, the practitioner is capable of working within her/his ZFI where the practitioner can implement change to improve “South Africa’s education crisis” (Wright, 2012).

Enacting feminist pedagogy in the 21st century: A co/autoethnographic self-study
Lesley Coia, Agnes Scott College, United States and Monica Taylor, Montclair State University, United States

Abstract
What does it mean to be a feminist educator and how would we know if we were? We have referred to ourselves as feminist teachers throughout our careers but it is only now that we have focused on this identification and its impact on our teaching. In this co/autoethnography we describe a co/autoethnographic self-study of our teaching that directly addresses how and in what ways our teaching could be considered feminist. The study took place over two years in multiple classrooms and educational settings. One of the findings highlighted in the paper is the importance of the methodology used to investigate one’s own practice. Co/autoethnography captures the richness of feminist pedagogy and illuminates areas of practice that may well have remained hidden. A key finding is that feminist pedagogy cannot adequately be described in anything other than a theoretically and experientially rich account of practice.

We began our research by reflecting on our past as feminist teachers situating the evolution of our feminist beliefs within the context of our life stories whilst simultaneously reading Ellsworth’s (1989) seminal article, “Why doesn’t this feel empowering? Working through the repressive myths of critical pedagogy.” In struggling to make sense of the ambiguity of power and voice, we looked for more concrete notions of feminist pedagogy. Webb’s
seven principles seemed to resonate for us: “Reformation of the relationship between
teacher and student, empowerment, building community, privileging voice, respecting the
diversity of personal experience, and challenging traditional pedagogical views.”

After several months of using these criteria, we realized that they limited the ways we
looked at our practice. We needed a more complex understanding of feminist pedagogy.
We returned to the poststructural feminist pedagogy literature and two concepts emerged:
unknowability and uncertainty. Like Ellsworth (1989) we came to see that feminist teaching
involves “a practice grounded in the unknowable [that] is profoundly contextual (historical)
and interdependent (social)” (p. 115). The uncertainty we welcome into our classrooms
opens up space for others to be heard. But it can often make us feel uncomfortable and
unsettled, as if we are on “shifting ground” (Lather, 2001, p. 191). As we worked together,
we came to the realization that the feminist nature of co/autoethnography (Coia & Taylor,
2007; Taylor & Coia, 2006) helped to ground our study.

For this particular study, we juxtaposed autobiographical stories from the past 10 years of
our collaboration with new reflections about our teaching practices. Monica examined her
mentoring sessions with teachers and students and Lesley examined two courses she
teaches: one on diversity; and one on gender and education. We amassed data from our
teaching and work together including teaching journals, field notes from our conversations,
e-mails and texts, digital videos, and student interviews. These collectively were used to
produce a co/autoethnographic narrative (Taylor & Coia, 2009). We co-analyzed these texts
using a reflective, participatory, and collaborative stance, examining them through "a
blurred lens of a researcher/participant, a subject/object, or an insider/outsider" (Taylor &
Coia, 2009, p. 177). We looked for categories and patterns to emerge by means of constant
comparison (Glaser & Strauss, 1967).

As we came to see feminist pedagogy as more complex, we saw notions such as uncertainty
and unknowability as central and in need of constant consideration. We understood that
they don’t have stable realist meanings: We live with our lack of perfection, ambiguity and
doubt. Our new found confidence has led to more explicit discussion of our feminism with
our students, a more equitable relationship as we do not shy away as much as we did from
criticism or direct confrontation of issues. We have come to think of this as living our
feminism. Co/autoethnography has the power to help teacher educators reach beyond the
classroom. We have to look outside the classroom to understand ourselves in it.

B7.3 Micropolitical dimensions of beginning teachers’ experiences: A self-study of
transitioning from teaching to teacher education
Nathan Brubaker, Monash University, Australia

Abstract
Problem statement and research question. Statistics concerning the low rates of teacher
retention in countries around the world are well known. Less understood are approaches to
effectively reducing teacher burnout and attrition and promoting professional longevity of
teachers. The micropolitical dimensions of beginning teachers’ experiences can be an
important source of burnout, attrition, and decisions to leave the profession. Understanding how beginning educators effectively resolve conflicts and negotiate the
interpersonal dilemmas of teaching can help inform efforts to decrease teacher dropout
and improve the quality of classroom instruction. In this study, I examined the
micropolitical dimensions of my experiences as a beginning teacher. Specifically, I investigated the following question: how did my participation in politically contested program reform efforts as a beginning teacher help inform my decision to transition out of teaching and into teacher education?

Conceptual framework. Teachers’ behaviours are influenced by their organisational contexts and involve influencing others through employing resources of power and authority to advance their interests. Micropolitical analyses (Ball, 1987) can be useful for understanding how teachers both formally and informally use authority to achieve their goals and deal with the contested nature of educational institutions (Potrac & Jones, 2009)—integral considerations in literature on teacher burnout (Guglielmi & Tatrow, 1998; Schaufeli, Leiter, & Maslach, 2009), attrition (Blankenship & Coleman, 2009), and retention (Borman & Dowling, 2008; Cochran-Smith et al., 2012; Hammerness, 2008). While micropolitical analyses have been conducted on such topics as teacher induction (Kelchtermans & Ballet, 2002b), development (Kelchtermans & Ballet, 2002a), mentoring (Achinstein, 2006), collaboration (Achinstein, 2002), policy (Kelchtermans, 2007), internship (Ehrich & Millwater, 2011), coaching (Potrac & Jones, 2009), and community (Warner, Brown, & Lindle, 2010), they have not been applied to teacher educators’ practices, particularly concerning the influences of micropolitical dynamics on teacher educators’ pedagogical identities. Conducting studies of beginning teachers’ experiences from a micropolitical perspective is therefore important for providing unique insights into teachers’ transitions out of teaching and into teacher education.

Findings. Three preliminary themes have emerged from more than 1,200 pages of data—using the constant comparative method (Glaser & Strauss, 1999)—concerning the micropolitical dimensions of my experiences as a beginning teacher. The first theme, focusing on material interests, is evident from the extent to which my efforts as a beginning teacher (in a primary school in the Northeastern USA) were continually concerned with creating conditions I considered necessary for properly performing my job (Kelchtermans, 2007). As a physical education teacher, my preoccupation with receiving material support commensurate to that afforded other programs throughout the school made me aspire for more than was possible within the given context. Consequently, I focused on material concerns to the detriment of cultivating relationships necessary to attain them.

Promoting change, my second theme, was evident from my efforts to pioneer programmatic reforms. As a beginning teacher, I was constantly mindful of the marginalised status of my discipline (Blankenship & Coleman, 2009; Whipp, Tan, & Yeo, 2007) and sought to remedy the injustices I perceived through constructing a more visible and instructionally-viable program in the school. Without sufficient appreciation for the magnitude and depth of entrenched expectations for preserving previous program practices, however, controversy and disappointment ensued—contributing to my decision to transition out of teaching.

My third theme, moving from alienation to acceptance, was evident from my efforts to reframe my outlook on my frustrations concerned with the micropolitical dimensions of my context. Rather than seeing the interpersonal difficulties and dilemmas of my context as largely personal and pedagogical, I more clearly discerned—with the benefit of hindsight—the organisational forces that impinged upon my efforts to pioneer programmatic and pedagogical reforms. Doing so helped me develop a deeper appreciation for the complexity
of interpersonal dynamics in schools, which helped solidify my desire to become a teacher educator.

Conclusion. The continued importance of micropolitical literacy (Kelchtermans & Ballet, 2002a) in educational organisations heightens the need to construct knowledge concerning the micropolitical dimensions of beginning teachers’ experiences. As a teacher educator, I can attribute such aspects of my pedagogical identity as emphasising relationship-building, collegiality, and dialogue to the micropolitical dimensions of my experiences as a novice teacher. Through the lenses of assumptions (Brandenburg, 2008), tensions (Berry, 2008), and integrity (Schulte, 2009), the insights provided by this study help illuminate the complexity of organisational influences on teachers’ transitions out of teaching and into teacher education. Such insight is important for demonstrating the value of self-study for advancing teacher educators’ professional development and for promoting excellent teachers who maintain their commitment to teaching.

Session number: B8  Location: Room 2B  Time: 10.30 – 12.00

Paper presentations  Books, literature and literacy teaching

Chair: André Mottart

B8.1  **Starting young: Collaborations to address disadvantage with storybook sharing and emergent literacy for Indigenous Australian students prior to school**

Janelle Young, Australian Catholic University, Australia

**Abstract**

Background/Context. Questions about ways to improve educational outcomes for disadvantaged students remain high on political agendas throughout the world. United Nations Children’s Fund (UNICEF, 2012) indicates that no nation is completely free of poverty and disadvantage, although some fare better than others. In Australia, the latest figures show that despite seemingly minimal effects from the global financial crisis compared to other parts of the world, close to 11% of families in Australia have an income of less than 50% of the national median and are living in poverty. In Aboriginal and Torres Strait Islander families the effects are even greater (ACOSS, 2011). For Aboriginal children in Australia, educational outcomes can be affected by a lack of opportunity caused by circumstances compounded by poverty and disadvantage. Indigenous students use a dialect of English as their first language and this means learning Standard English when they come to school. These circumstances can affect educational outcomes as demonstrated through National testing of reading that show two-thirds (67%) of Year 5 Aboriginal and Torres Strait Islander students achieved at Australia’s national minimum standard in reading, compared with 93% for non-Indigenous students (ACARA, 2009). In a more recent report (COAG, 2012), the comparison of data from 2008 to 2011 shows a significant increase in the number of Indigenous students achieving at the National standard for Reading in Year 3 and Year 5, but actual progress in achievement levels only increased in two states. Thus while some progress is occurring, there is still much to be done.

In seeking to address educational outcomes in reading for Indigenous Australian students, a collaborative study located in two regional areas of Australia was conducted. This study examined the effects of using a storybook sharing program with aligned interactive
language and literacy activities to enhance emergent literacy understandings (Cabell, Justice, Konold & McGinty, 2011) in the prior-to-school years. An additional key component of the study was to develop partnerships involving educators, parents and students. For many young children regular storybook sharing was not a common cultural practice at home, and this project made more opportunities available.

Research Questions. Two research questions guided the study and these were:

1) What is the effect of implementing a storybook-sharing program with aligned language and literacy activities to enhance emergent literacy understandings for young Indigenous students prior to school? and

2) In what ways do educators, parents and students work together to enhance literacy-learning outcomes for young students in the prior-to-school years?

Conceptual Framework. Conceptually the program was multi-dimensional and included professional learning sessions for educators, the provision of new resources developed specifically by the researcher to meet the aims of the study and educators and parents using the materials both in early learning centres and at home. A total of sixteen packs for literacy were developed and each included a focus storybook and two activities for developing emergent literacy understandings. Individual pre testing of emergent literacy understandings was conducted for a total of thirty-nine students across two communities in either February or early March, which is in the first few weeks of the school year in Australia. Approximately 25% of the students in the study did not have an Indigenous cultural background.

Findings. Findings from the pre-testing showed many of the students had limited knowledge and understanding of the various aspects of emergent literacy. While some were familiar with storybooks and aspects of print, many displayed little knowledge in the early months of the year. Post-testing showed an improved level of emergent literacy understandings with young Indigenous students showing greater confidence with their knowledge about books and print. The materials provided for educators were utilised differently in both centres, with one using them regularly throughout the project and the other showing greater interest in the latter months of the project only. One centre set up a borrowing system so parents could borrow the story-sharing packs and use them at home and the other encouraged parents to come to the centre to use the materials.

Conclusion. While educators in both centres agreed to participate in the study in the initial stages, their responses in relation to participating and using the materials were quite different. This study has shown that when a program includes professional learning sessions for educators, practical resources to use in class and building relationships with families young Indigenous Australian children in the prior to school years can benefit and develop emergent literacy understandings.

B8.2 Reinvigorating content and literacy teaching in diverse classrooms
Jenny Miller, Monash University, Australia

Abstract
Teachers in culturally and linguistically diverse classrooms work in highly charged contexts where policy, curriculum, student backgrounds, equity issues and pedagogical practice provide both resources and constraints. Often, these classrooms are in underachieving schools in low socio-economic areas. In Australia, teachers in these schools battle to respond to the needs of their students in the face of a policy background of school reform,
a new national curriculum, national benchmarks and assessment, increased administrative loads, and moves towards teacher standards, outcomes-based funding, performance related pay, and funding cuts to public schools in real terms.

In research on such classrooms, there is a growing awareness of the difficulties faced by language minority students in all mainstream content areas, especially those with complex technical and conceptual terminology. Policy and pedagogical and curriculum reforms however tend to based on monolingual perspectives and have mainstream students in mind. Teachers are expected to achieve with language minority students the same outcomes they do with native speakers. This paper reports on an Australian Research Council funded project which aimed to develop a model for effective content-based English language teaching to high school refugee background students, all of whom struggled with literacy across the curriculum. At the heart of the study lies the problem of how teachers are to balance the many constraints placed on them by the issues raised above, with the drive for excellence in classroom practice. A related problem involves ways to accelerate the impact of research on policy and practice.

The research questions addressed in the project included:

1) What curriculum and teaching strategies are used in programs catering for refugee background students?

2) How effective are current practices in engaging students and generating improvements in literacy levels?

3) What kind of literacy model would generate better outcomes in pedagogy and student academic progress at high school?

In developing this project and analysing the data, we found it imperative to integrate three theoretical domains in the conceptual framework. Relevant research included studies in content-based teaching (CBT) and content and language integrated learning (CLIL). The conceptual framework incorporated second language perspectives (Krashen, 2003), literacy perspectives which take account of social context and scaffolding (e.g. Feez, 2002) and transformative pedagogy, which combines explicit language teaching with a focus on student identity (Cummins, 2000). This paper focuses on the action research phase of the larger study, carried out in the second year of the project. In terms of methodology, this paper will present findings from observations, teacher interviews and student focus groups.

The questions above will be addressed with a view to gaining insight into what excellence in classroom practice might look like in regard to struggling second language speakers.

By way of introduction, the presenter illustrates why content language in any subject area is inaccessible to many students, and briefly outlines the language-focused approach used to scaffold content learning in the study. The example of Year 9 science is used as the content area. The paper is in two main parts. First, the use of strategies and their effectiveness in these classrooms is presented using observational and interview data. Second, a model for a reinvigorated literacy pedagogy in culturally and linguistically diverse classrooms is proposed.

Our findings suggest that most teachers make routine use of at least some strategies for developing language and literacy but may not always work towards building learner autonomy. Lack of attention to autonomous learning is explained in part by a lack of resources and time, but also by gaps in teacher preservice and inservice. That is, a deep knowledge of how language and content are related is seldom a focus of teacher training. In
the second part of the paper, the presenter uses a pedagogical model that takes account of
the students’ needs, and integrates curriculum content and language/literacy learning
through careful teacher planning and scaffolding.

The conclusion is that since many classrooms are culturally and linguistically diverse, all
teachers need to be aware of second language principles, processes and teaching practices.
A framework for teaching a range of subject areas that takes account of the role of
language in learning can only enrich pedagogy and student experience.

B8.3 Combining literature with craft by storycrafting method
Juli-Anna Aerila and Marja-Leena Rönkkö, University of Turku, Finland

Abstract
Finnish childhood education stresses art-related ways of learning. The high quality of art-
related education has a positive effect on children’s well-being, self-esteem and identity
development. Our research material consists of anticipatory stories collected by
storycrafting and characters made by children with craft materials and techniques as well as
the character descriptions. The storycrafting method is implemented in this study as an
anticipatory story based on a fragment of a fictional text. The character is made using the
concept of a holistic craft, where the maker designs, produces and evaluates the whole
process. The aim of this study is to examine children’s individual activities and to categorise
the typical features of these activities. The aim is thus to examine individual children’s
thinking processes during the craft-making process and to test the different approaches to
preschool-age children thinking assessment. From the results of this research, it is possible
to draw conclusions regarding the children’s literacy and ability to take advantage of their
own production of different kinds of materials in the craft-making process. It seems that
literature and storycrafting support designing craft products.

The data was collected in a preschool group in Luvia. The preschool group consisted of 14
children, 8 boys and 6 girls. The analysis was conducted using content analysis, a method
that can be carried out in qualitative studies in different ways. The aim of content analysis is
to create a clear and uniform description of a phenomenon to be examined. The analysis is
based on the fact that the material is first broken down into the parts and then collected
and reconceptualised as a logical whole in a new way (Krippendorff 2004).

The aim of content analysis in this study was to examine the children’s individual activity
and to categorise their activity. The aim was thus to determine the thinking processes of
individual children during the craft-making process and to evaluate the feasibility of
different approaches when assessing the thinking of preschool-age children.

Part of the content analysis was conducted using the meaning cue analysis method
developed by Toivonen (1998).

In our study we were able to formulate working methods and activities that had specific
targets but were still flexible and met the needs and interests of the children. Our study
showed that children are able to achieve challenging learning objectives when they are
allowed to fulfill their own needs and when adults offer themselves as resources to which
the children can turn. We hope that the role of teacher is changing from being instructive to
being present as a source of information and guidance. In addition, we hope to see the
curriculum become more flexible, making the different methods of action possible.
Based on the study results, it is possible to conclude that most children benefitted from the
process. More research and experiments are needed on the use of children’s literature in
day care and schools. Too often, the literature is used only for free-time reading or enjoyment, when the literature could be at the heart of all learning (Galga et al. 2000; Toivonen 1998). This experiment shows that this could be the case. We already know a great deal about children’s favourite books and why they read, but less is known about how they interpret their reading (Appleyard 1990; Rhedin 2004). This experiment provides evidence that writing connected to reading children’s literature could be used in evaluating and interpreting children’s understanding of literature.

By connecting reading with different kinds of activities, the teachers obtain diverse information regarding the children in their group, including information the children cannot put into words (Aerila 2010; Toivonen 1998). Even this small experiment shows how important it is to consider the differences between boys and girls and children’s different backgrounds when organising activities. An important finding from this study is that children experience their own thoughts, experiences and observations as meaningful (see, e.g., Fernström & Laamanen 2006, 137; Rönkkö 2011). Craft making is mainly a goal-orientated action in which the thoughts of the maker become concrete in the design and later in a product (Lepistö & Rönkkö 2009, 53). In craft making, attention must be paid to the materials, tools and technologies that are used. The children should be allowed to reflect on their own worldviews and matters that are important to them (e.g. in the design). One can use this to help with, for example, storycrafting.

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**Session number: B9**  
**Location: Room 2C**  
**Time: 10.30 – 12.00**

**Paper presentations**  
**Chair: Kris Rutten**

**Teacher identity**

**B9.1 Identity matters: An ethnographic study of four Nonnative English-Speaking Teachers (NNEST)**

Lawrence Jun Zhang and Donglan Zhang, University of Auckland, New Zealand

**Abstract**

NNEST identity is an intriguing and complex phenomenon because of composite factors comprising speakers’ accent, physical features, skin color, cultural patterns of behavior, English proficiency, lived experiences, among other things, which are related to their teachers of English to speakers of other languages (TESOL) professional practice. Given the globalized world in which we live as TESOL professionals, it is important for us to recognize the role of NNEST identity and examine it from multiple perspectives. Sekimoto (2012, p. 1) posited that “deconstructing identity requires moving beyond the symbolic construction of social categories, and instead focusing on how a perceptual and embodied subject is constituted through communication”. We argue that, in the field of applied linguistics, we need to re-examine NNEST identity with reference to how NNESTs exercise their agency in professional and social settings, taking stock of their expertise in the subject matter. This argument is presented in the context of globalization and the dynamics of English, which is not only reflected in changes in its lexis, syntactic variations, semantics, and pragmatics, but also in its affiliations to particular groups of users who claim to be the owners of the variety of English that they use. Using an ethnographic case study approach, we outline how four NNESTs’ use of English is intertwined with their identity construction and how such identity is brought out as a way of embodiment resulting from spatiality and temporality in
becoming teachers. We illustrate how the legitimate “Expanding-Circle” English users managed to exercise their agency and identity; in contrast the three “Outer-Circle” users, in so doing they lost many opportunities of access to the rich linguistic repertoire that the “Expanding-Circle” users had. Implications for pedagogy are discussed.

B9.2 **We teach who we are – But who do we think we are?**
Sonja van Putten and Gerrit Stols, University of Pretoria, South Africa

**Abstract**

We teach who we are (Hamachek, 1999; Palmer 2007). Thus, who I am as a teacher can be seen in my teaching. On the one hand, Beijaard et al (2000) state that the participant is the person best able to describe their PMTI; on the other hand, Palmer (2007) says we teach who we are. In this study the link between who I am in the classroom, and who I think and say I am, is under scrutiny. The following question is posed: Is the self-perceived PMTI (Professional Mathematics Teacher Identity) the self that is actualised in the classroom?

The professional identity of the person who teaches is an essential factor in determining the success of what happens in the classroom. Mathematics education in South Africa, despite the many changes in education since 1994, remains in crisis. While effort and money have been expended on improving facilities and teachers’ knowledge of mathematics, the crisis persists. Arends and Phurutse (2009) believe that a difference can be made to the state of mathematics education by “good teaching”: “The study of teachers and teaching deserves much more attention than it has been given, particularly in the light of growing empirical evidence that good teaching makes a huge difference to learning regardless of the socio-economic status of the learners” (p. 45). Good teaching focuses on the teacher: who is this person? This research purports to gain insight into the professional identity of the pre-service mathematics teacher – investigating the phenomenon at its origin – in terms of how the individual perceives her professional identity and how that identity is actualised in the classroom.

The professional identity of the person who teaches is an essential factor in determining the success of what happens in the classroom. Mathematics education in South Africa, despite the many changes in education since 1994, remains in crisis. While effort and money have been expended on improving facilities and teachers’ knowledge of mathematics, the crisis persists. Arends and Phurutse (2009) believe that a difference can be made to the state of mathematics education by “good teaching”: “The study of teachers and teaching deserves much more attention than it has been given, particularly in the light of growing empirical evidence that good teaching makes a huge difference to learning regardless of the socio-economic status of the learners” (p. 45). Good teaching focuses on the teacher: who is this person? This research purports to gain insight into the professional identity of the pre-service mathematics teacher – investigating the phenomenon at its origin – in terms of how the individual perceives her professional identity and how that identity is actualised in the classroom.

The term Professional Mathematics Teacher Identity is posited in this research as involving an individual who has studied the subject for the specific purpose of teaching it. The bond between the teacher and the subject she teaches is central to PMTI, a bond that includes a view of the subject and beliefs regarding the subject, and even emotions related to the subject. If Professional Teacher Identity (PTI) can be defined as “who I am at this moment” i.e. the self that is the sum total of past and present experiences both personal and social, then PMTI is “who I am at this moment in this context” in which PTI is situated within that “relationship with mathematics” which includes beliefs and emotions associated with the subject, as well as “the ways they [mathematics teachers] see themselves as subject matter experts, pedagogical experts, and didactical experts” (Beijaard, Verloop & Vermunt, 2000, p. 751).

The theoretical framework of this study is a model posited by Beijaard et al, (2000), in which PMTI is investigated in terms of those three aspects: subject specialist (involving subject content knowledge and skills); teaching-and-learning specialist (involving the knowledge and skills related to the preparation, execution and evaluation of the teaching and learning process) and carer (involving the knowledge and skills required to undergird and support the socio-emotional and moral development of learners). This is an explanatory, interpretive case study in which data was provided by interviews with the participants and observations of those participants teaching mathematics in the classroom.
in order to investigate the congruence between “Who we say we are” and “Who we are when we teach”. Through observation of PMTI-in-action in the classroom, finding the answers to this question completes the ‘picture’ by allowing comparison between the individual’s perceptions of their PMTI and the practical outworking thereof.

This study found that the espoused theory may not be the same as the theory-in-use in the classroom. It is possible that a discrepancy exists between these two: that the personal perception of PMTI is not the same as the actualised PMTI. The consequence is that research of professional teacher identity which does not include observation of the teacher-in-action is incomplete. Researchers in this area need to be conscious of the fact that what is described in personal narratives regarding PMTI may be idealistic rather than real, unless the individual is a truly reflective practitioner.

B9.3 **Consciousness, self and education: Meeting a portraiture participant many years later**

David Goodwin, Missouri State University, United States

**Abstract**

The biographical study of the lives of teachers (Goodson, 2008), teacher identity (Day & Kington, 2008; Akkerman & Meier, 2011), and self-hood (Craig, 2011; Tickle, 1999) occupy a central place in a fuller understanding of teachers, teaching, and learning. The identity or self of the teacher (as with persons generally) is such a large ramified issue related now-a-days to many issues including multiplicity, duality, dialogical interaction, continuity and change, sameness, and/or oneness. The way the self (or identity) of the teacher is understood and researched is often based on narrative descriptions, externally developed or more objective derived categories or themes, and/or theoretical orientations (like stages in teacher/adult development). The idea of the self as having continuity for example or the analysis of individual experience into multiple selves, or even the self as evolving in relation to meaningful communication between persons are often “external” to the person when seen through the participant’s own inner subjective sense of who she is and how she actually understands and experiences phenomena related to self, like feelings of multiplicity or sameness. A clear focus on understanding individual teachers’ consciousness (or subjective experiences) in relation to their life and work promises to deepen understanding by portraying actual inner conditions of the teacher as a unity or in terms of the unity of the person.

In this study, direct attention is given to consciousness and subjective experience of teachers using essentialist portraiture (Witz, 2006; Witz, Goodwin, Hart, & Thomas, 2001). As a case example, I examine meeting and interviewing many years later a portraiture participant who was part of an earlier study (where I developed portraits of teacher growth (Goodwin, 1999)) to understand how she has developed and unfolded since. A major aspect of portraiture back then as now is to evoke the consciousness and unity in the participant. In this case, fourteen years had passed between the writing of the original teacher growth portrait and the comparatively recent “follow-up” interview. The issue that motivated the current longitudinal interview work concerns the unity or oneness of self. Witz and Goodwin (2012) argue that we are all in some sense the same person over time, from day-to-day in our interactions, thoughts, and feelings, that we are as individuals the same “consciousness-and-‘I’” that is continuous and exists independently as “an object of study in
its own right” (p. 699).

What does it mean then to understand a portraiture participant as the same person, the same “consciousness-and-I’’ after years have passed? Lawrence-Lightfoot highlighted this issue numerous times in multiple writings as she examined how a painted portrait of her completed some 25 years prior still represented important aspects of who she is now (e.g., Lawrence-Lightfoot & Davis, 1997). I have been investigating this phenomenon in experienced teachers. The analysis of this individual participant illustrates the participant’s unfoldment which is in tune with the understanding developed in the original portrait. Even though there have been many changes in her life, her consciousness-and-I’ (sense of self) are inseparable and show oneness in who she is as a person.

**Session number: B10**

**Location: Room 1B**

**Time: 10.30 – 12.00**

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**Teachers’ professional development**

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<td>Carlijne Ceulemans, Elke Struyf, University of Antwerp, Belgium and Maarten Simons, KU Leuven, Belgium</td>
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**Abstract**

In this contribution, the general ISATT conference theme on the urge for excellence and the need for educational standards, is articulated in a specific way. The main question of the research reported on, is: what is precisely that quality standards 'do' in education? That is, what kind of practices do they generate? And, in these doings, what realities do they entail/create?

As our aim is to look for the 'doings' of standards, we will not start from what educational standards are intended for; in other words, from what they are said to be doing. Instead, we took as point of departure one specific practice, that of (self-)evaluation, in which one specific educational standard, that is, the Flemish professional profile of the teacher, finds its effect. Starting from the profile and its list of core competencies as central actors, we describe how exactly it is these standards 'work'. In line with actor-network theory, I speak of 'description' as the retrieval of 'scripts', scenes or scenarios from a given situation, in which human and nonhuman actors interrelate. This means that not only 'Who are the actors?' and 'What do they do?' serve as central questions for analysis, but evenly so: Where is the action taking place? From which angle(s) is it brought into the picture? How are the human and nonhuman inter-relations staged?

In the contribution, we discuss three scenes in which we traced the 'role' played by the teacher's professional profile:

1) that of the visit of an inspection commission in a teacher training institute; 2) that of the collection of inspection reports made public at the end of the inspection procedure; and 3) that of reconstruction by key figures who co-acted in the practice of (self)evaluation. As such, this contribution offers multiple accounts of the doings of educational standardization, that is, of what they make us do.
| B10.2 | **Elementary school teachers’ professional development in a school-university partnership**  
Sang Guoyuan, Zhou Jun, Beijing Normal University, China; Yu Kailian and Zhang Jing, Capital Normal University, China |
| Abstract |
Educational partnerships between schools and institutions of higher education provide a powerful means for enhancing student achievement, promoting teacher professional development and cultivating college going cultures. Throughout China, many SUPs currently exist and are working hard to improve educational practices and teacher professional development. However, amount of professional development activities appear to be ineffective, because of absence of providing teachers with opportunities to develop knowledge and skills in the school-based settings, with guidance of university expertise. The current study contributes to our understanding of how teachers learn within the context of school-university partnership in a Chinese context. |

| B10.3 | **Australian professional standards and professional identity: The link to improving teacher quality and educational outcomes**  
Carolyn Broadbent and Mary Gallagher, Australian Catholic University, Australia |
| Abstract |
That teacher quality is integrally linked to improved student achievement has been at the forefront of government thinking regarding the development of an internationally recognised education system in Australia. It has also provided the catalyst for the formation of the Australian Institute for Teaching and School Leadership (AITSL) to promote excellence in teaching and school leadership. Flowing on from this initiative has been the introduction of the Australian Professional Standards for Teachers (APSTs). These standards provide a cohesive framework of expectations across four career stages: Graduate, Proficient, Highly Accomplished and Lead, to enhance and improve teacher quality and thereby increase the public standing of the profession (AITSL Preamble, 2011). This paper comments on international experiences with teacher standards, provides a brief overview of the development of the APSTs in Australia and identifies some benefits and challenges for teacher accreditation and registration authorities, employer bodies, and universities offering teacher education programs. In the form of a case study, the paper focuses specifically on the design and implementation of a successful local, cross-sectoral and collaborative professional learning project currently being undertaken in Canberra, Australia. The project brings together a registration authority, universities, schools, employer bodies, teachers and pre-service teachers, to form a dynamic professional learning community focused on facilitating a deeper understanding of the APSTs through the three domains of teaching: Professional knowledge, Professional practice and Professional engagement. Emerging from the project has been the establishment of closer links between teachers’ professional learning and pre-service teacher education, including the development of a transformative learning Model of Practice that integrates the APSTs and university graduate attributes. A core element in the model is that of professional identity which aims to enhance pre-service teachers’ professional experiences in schools. The paper concludes with a critical analysis of the project outcomes to date and argues for |
a greater recognition of the importance of professional identity, as well as achievement of the APSTs, in promoting enhanced teacher quality and professional growth.

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**B11.1 Collaborative curriculum making in the physical education vein: A narrative inquiry of space, activity and relationship**
Cheryl Craig, University of Houston, United States; Jeongae You, Chung-Ang University, Korea and Suhak Oh, Inha University, Korea

**Abstract**
Located at the intersection where teaching and curriculum meet, this narrative inquiry examines how collaborative curriculum making unfolded between and among six members of a physical education (PE) department in a middle school in the mid-southern US. The work takes the position that long-term relations are prerequisite for collaboration to occur and that Schwab's four commonplaces are essential to the curriculum making act. Three narratives, emblematic of three different iterations of collaborative curriculum making emerge: Physical Space Story (The Sports Field), Physical Activity Story (The Fishing Field Trip), and Human Relationship Story (Team Teaching). These stories of collaborative experience arise from the social narrative history of the school milieu and press toward the future in ever changing ways.

**B11.2 The implementation of new curricula for educational studies in teacher education: The case of North Rhine-Westphalia/Germany**
Franziska Schulze-Stocke, University of Münster, Germany

**Abstract**
Due to a shift from input-to output-oriented forms of governance in the higher education system in Germany, university teacher education has increasingly focussed on standardization and quality assurance. In public discussions – especially since PISA and the Bologna process – knowledge and competencies of teacher students and teachers and their impact on student achievement in schools receive high attention (Bauer & Prenzel, 2012). As part of the Bologna process bachelor- and master-of-education programs have been designed and implemented (Hochschulrektorenkonferenz, 2006). The standards for the educational studies (“Bildungswissenschaften”) in teacher education (Kultusministerkonferenz, 2004) and the legislation for teacher education in North Rhine-Westphalia (Schulministerium Nordrhein-Westfalen, 2009) both explicitly emphasize the necessity to develop relevant professional competencies during university teacher education. This is a great challenge for the (re-) design of study programs. Up to now it is not clear how universities react upon these new requirements for the educational studies in teacher education.

The current study examines whether the curricula for educational studies regulated through state requirements really have been reorganized by the universities. Based on a content analysis of ‘module-handbooks’, study- and examination regulations etc. from ten universities in North Rhine-Westphalia it is investigated, up to what extent the new requirements have been implemented in these documents. Further on, the study will
compare new regulations with the previously valid curricular norms (see also Terhart, Lohmann & Seidel, 2010). As a first result, a different scope and a different focus in educational studies in teacher education between the ten universities have been identified. Additionally, differences in the distribution of the obligatory and non-obligatory courses can be found between the analysed curricula of the ten universities.

B11.3 Effects of non-curricular school factors as school culture, values on professionalism, organizational structure and leadership on the successful implementation of constructivist national curriculum
Sinem Vatanartiran, Bahcesehir University, Turkey

Abstract
The Ministry of Education of Turkey changed the national educational programs in accordance with recent approaches in education as part of the educational reform that covers basic and secondary levels of schooling. This educational reform that was proposed to change the formerly traditional, behaviorist, and teacher-centered programs into constructivist and student-centered programs would obviously have effects on millions of students, educators and families. Its long-term influence is expected to be seen on the whole society in coming years. The purpose of this study is to describe how non-curricular factors like school culture, values on professionalism, perceptions on the new curriculum and organizational structure and leadership of the schools ease or impede with the implementation of the new national educational programs. A pure qualitative research design was used to study this problem. Multiple case study was carried out with semi-structured, face-to-face interviews with teachers and administrators from four schools of different socio-economic regions in Istanbul. Some of the official documents of the Ministry of Education were also used as supportive evidence to the data collected through the interviews. The results show that centralized organizational structures, bureaucratic barriers for school principals, negative perceptions of teachers on constructivism, inefficient change management of school principals, teachers' inadequate perceptions on teacher professionalism, type of in-service training programs, and some aspects of school culture can impede with the successful implementation.
education; minority and special education; higher and professional education; lifelong learning and development.

These contributions also cover a wide range of research techniques/methods, many of which have evolved over time from being unusual and radical to becoming commonplace and mainstream while stimulating new ones to emerge in attempts to solve the problem of capturing and understanding the complex ideas that permeate classrooms of all kinds, including those without walls.

Thus, recognising past contributions serves to remind us of the wealth of potential still inherent in these theories and procedures while those members new to the Association may derive some inspiration from them.

B12.2 The nature of expertise in the teaching profession (in FLT perspective)
Michaela Pisova and Frantisek Tuma, Masaryk University, Czech Republic

Abstract
Teacher professionalisation is considered one of the key issues in the attempts to raise the quality in education. Therefore, it is vital to learn more about expert teachers, about the nature of expertise in teaching.

Research of expertise in the teaching profession has been inspired by studies on expertise in other domains. This mostly psychological research adopted two main approaches: the absolute approach, i.e. the study of exceptional individuals, and the relative approach based on comparative studies of experts and novices (Chi, 2011). Research in teacher expertise has been launched later, however, since the 1980s we have seen a number of studies in different cultural contexts. They either investigate expertise as a state (e.g. Berliner et al., 1988; Peterson and Comeaux, 1987, Leinhardt, 1989; Turner-Bisset, 2001), or adopt a developmental perspective (Bereiter, Scardamalia, 1993, Tsui, 2005), i.e. focus on development and maintenance of expertise.

Our research takes into consideration the three currently dominant paradigms in the study of teacher expertise as this paradigmatic plurality yields fairly different characteristics of the phenomenon, each of them capturing its specific aspects. These include: 1) the currently dominant perception of expertise as intuition and tacit knowledge within a stage model of professional development (Eraut, 1994, etc.), 2) the cognitive psychology based view of expertise as conscious deliberation and organised knowledge base (Glaser & Chi, 1988), and 3) the dynamic view, the perspective of expertise as a process (Bereiter, Scardamalia, 1993). Attention is also paid to a relatively new concept of adaptive expertise (Hatano, Inagaki,1986) as it is linked to new demands and increasing pace of educational change.

The underlying and crucial question in any of the trends, of course, is, how to define and identify an expert teacher. Here our research builds on a study conducted by D.J. Palmer et.al. (2005), further inspiration is provided by a prototypical model by Sternberg and Horvath (1995) and in studies by Bond (2000) and others.

Our research also acknowledges the assumption that teacher expertise is a culture specific issue (Tsui, 2005). Research aims include theoretical, methodological, and empirical issues. The paper will present partial outcomes of the research, namely development of methods for identification of expert teachers, and for systematic investigation of the nature of their expertise. Further on, the results emerging from the research will be discussed and put into a comparative perspective in order to account for the cultural differences in the perception
of the phenomenon.

As regards methodology, the character of our research problem, i.e. expertise, implies multiple-case study as an appropriate research design. In accord with the characteristics of case studies (Merriam, 2001) the research utilises combination of methods and comprises both the initial theoretical survey and empirical research.

In the empirical research purposeful sampling was adopted: the sample was recruited from one relatively tightly delineated domain, that of teachers of foreign languages (mainly English and German). The reasons for that decision are related to the current state of knowledge of expertise in teaching, i.e. mainly domain-dependence and pedagogical content knowledge as one of the central aspects of expertise. The recommended number of cases in a multiple-case study of a comparable level of complexity is up to 15 (Miles, Huberman, 1994). In our research an ‘inverted pyramid’ approach is used, i.e. the number of samples will gradually narrow down starting from a cohort of 30 teachers.

The design of our empirical research includes three phases. The first one will be presented, i.e. partial outcomes of the investigation of the nature of teacher expertise conducted through direct observations with consequent analytical interviews in at least 4 lessons of each teacher and content analyses of the transcripts. Partial results of expertise research will attempt to pinpoint the salient features of teacher expertise focusing specifically on the cognitive and conative domains. In addition to that, methods and design instruments to investigate and assess expertise will be discussed.

The work on expertise in teaching is partly motivated by the need to raise the status of the teaching profession by demonstrating to the public that like experts in other professions, experts in teaching possess knowledge and skills which are no less sophisticated. Research on expertise, its identification, development and assessment may thus be viewed as a vital prerequisite for setting the standards that would stand as goals towards which the members of the profession may aspire. Last but not least, learning about expertise and its acquisition may provide information critical for reshaping and transforming pre-graduate as well as further teacher education.

B12.3 How to recognize the excellence of teachers who research their own systematization of knowledge?
Luiz Sanches Neto, Samuel Souza Neto and Mauro Betti, Universidade Estadual Paulista, Brazil

Abstract
The problem addressed in this research is limited to the scope of educational theories and public policies oriented towards professionalization of teaching, traversing the notion of teaching professionalism, in which it is expected that teachers working in basic education should develop their own knowledge in a permanent process. However, there seems to be some notion of dependency of these teachers to specialists as the theoretical and methodological contributions indicate that the mediation between school and university corresponds to the "academic researcher". The publications show the coexistence of two conceptualizations of "teacher-researcher": one that refers to the researcher-teacher, in which the emphasis is on the academic research activity, and another that refers to the teacher-researcher, in which the emphasis is on research activity linked to teaching. It
seems necessary to deepen the understanding of both to overcome such division. In this sense, the concept of teacher-researcher could indicate progress in the dimension of thinking beyond the division between school and university researchers, or between teachers and academic researchers. There is an assumption that the practice engenders an epistemology, and we – teachers and researchers – must unveil it. Therefore, the general objective is: to understand the knowledge developed by teachers researching their own teaching practices. Specifically, this investigation concerns how teachers systematize their pedagogical work while teaching physical education in schools. The specific objectives are: to identify how teachers organize teaching and research based on shared knowledge; to analyze how each teacher dialogues with what is discussed collectively; and to elucidate the critical appropriation and effectiveness of knowledge produced and shared. The option for qualitative research refers to methodological procedures involving collaboration with a group of physical education teachers who seek to reflect on teaching knowledge and professional practice in a kind of autonomous community of teachers. The techniques proposed for obtaining data are: observation, documentary source, semi-structured interviews, focus groups, and content analysis. The research has three phases planned for the data organization, with the following characteristics: exploratory, focused, and interpretive. Documentary source is highlighted in the research with teachers, for the major amount of information from all meetings’ records since 2005. There have already been over 100 meetings between teachers considering monthly meetings and participation in scientific and cultural events. We performed a synthesis of the reunions, with brief descriptive analysis including date, number of participants, venue, and developed activities; most encounters occurred in public spaces in the metropolitan region of São Paulo, Southeastern Brazil, where most teachers work in public schools – the largest public school system in the world – which has more than 220 thousand teachers and 4.2 millions of students in 5.3 thousand schools. There is a peculiar dynamic in the communication among the investigated teachers because, in addition to the meetings, they share messages and files on a website. All messages are archived on the electronic page, and query is possible for any participants. On average almost 100 messages are shared each month. Among the teachers linked to the group for at least 4 years, 12 subjects were selected for the investigation, with the following features: 7 women and 5 men, 10 teachers working in public schools and 2 teachers in private schools with different grades; 8 teachers attended Graduate School, 7 completed MSc, and 2 are currently enrolled in PhD; 3 teachers have experience with Higher Education, and 4 work in online tutoring. It was noted that the production of knowledge meets the academic criteria of validation, though not all teachers have a career in Higher Education, i.e., they have no obligation to meet the modus operandi of the teaching profession based on academic research. The 1st phase – exploratory – was completed with semistructured interviews and the results pointed to 6 categories: (a) the forms of action in the reflective process involving the description, information, confrontation, and reconstruction, (b) content knowledge, pedagogical knowledge, self-knowledge, knowledge of students, curricular issues, the educational context, and educational goals, (c) the autonomy of teachers, (d) the professionalism of teachers, (e) the form of practical arguments with evaluative, conditional, empirical, and situational assumptions, and (f) dialogicity in the pedagogical work. Provisional findings indicate the importance of a collaborative approach to research with teachers, as the
subjects investigated are also researchers, and also provide evidence that particular attention is needed to the rigor of the procedures guiding the subjects investigated for sharing the data analysis.

Session number: B13  
Location: Room 4C  
Time: 10.30 – 12.00

Paper presentations  
Students’ motivation and self-concept  
Chair: Isabel Rots

**B13.1 An empirical typology of student teachers: Differences in professional engagement and motivation for teaching**

Isabel Rots and Antonia Aelterman, Ghent University, Belgium

**Abstract**

Problem statement, theoretical framework and research questions. In a climate of recurring teacher shortages, attracting motivated people into the teaching profession is an international concern (OECD, 2011). Although a growing body of research examines teachers’ motivations, beliefs, and early career development (see Cochran-Smith & Zeichner, 2005), there is a need for studies adopting more sophisticated and robust methods of analysis. Particularly studies applying a typological approach to examine whether and how distinct types of (student) teachers adapt differently to their professional contexts and show varying patterns of development in their motivation for teaching (Richardson & Watt, 2010; Thomson, Turner, & Nietfeld, 2012).

This paper proposal is a part of a larger research project that investigates the development in student teachers’ motivation for teaching during the course of their teacher education program, resulting in a particular decision on job entry upon graduation. The “Factors Influencing Teaching Choice” framework (FIT-choice, Watt & Richardson, 2007), which comprises 12 motivation factors, is grounded in the expectancy-value theory (Eccles, 2005) and offers a theoretically grounded and psychometrically strong approach to examine teaching motivations and their correlates over time (see the recent cross-cultural study of Klassen, Al-Dhafri, Hannok, and Betts, 2011). An important contribution to previous research based on the FIT-choice framework, is that the present study is among the first to apply a typological approach. Given the diversity among entrants to teacher education for secondary school and in career decisions following graduation (Authors et al., 2010), we assumed that student teachers have different levels of professional engagement, already at the outset of teacher education. Building on Watt & Richardson (2008), we expected to identify a typology of student teachers based on their planned effort in teacher education and their planned entry into teaching upon graduation.

The current proposal tackles the following research questions:

1) Are there identifiable types of student teachers having distinct profiles of professional engagement at the outset of teacher education?

2) Do distinct types of student teachers show different motivations for teaching at the outset of teacher education?

**Method.** A total of 728 students enrolled in teacher education for upper secondary school in Flanders (Belgium) completed a questionnaire at the beginning of the teacher education program (response rate of 81.71%).

Next to background variables (e.g., gender, age), the questionnaire assessed:
(1) Professional engagement: ‘planned effort in teacher education’ and ‘planned entry into teaching upon graduation’ (both adapted from Watt & Richardson, 2008).

(2) Motivation for teaching: 12 motivation factors of the FIT-choice scale (Watt & Richardson, 2007).

Cluster analysis was conducted to classify types of student teachers based on their scores for the professional engagement variables. Based on Gore (2000), a two-step procedure was used in order to obtain a stable and highly interpretable cluster solution with maximum interpretable discrimination between the clusters. Cluster cross-validation (Beckenridge, 2000) was used as an additional test of stability.

Next, (M)ANOVA tested for differences among the distinct types (clusters) of student teachers with respect to their motivations for teaching.

Findings. Based on a two-step cluster procedure with double-split cross-validation, we found that a five-cluster solution yielded five clearly distinct, stable and interpretable clusters:

1) The ‘highly engaged persisters’ scoring high on both planned effort and planned entry.
2) The ‘highly engaged switchers’ scoring high on planned effort and average on planned entry.
3) The ‘lower engaged persisters’ scoring average on planned effort and high on planned entry.
4) The ‘low engaged switchers’ scoring relatively low on both planned effort and planned entry.
5) The ‘disengaged desisters’ scoring very low on both planned effort and planned entry.

MANOVA (FIT-choice scales as dependent variables) revealed an overall significant effect of cluster membership with a medium-to-large effect size ($\eta^2 = .11$).

Separate univariate ANOVAs revealed a significant relation of cluster membership with all motivation factors, except ‘time for family’. The effect sizes ($\eta^2$) ranged from .02 to .34. Between-cluster differences in each of the motivation factors were further examined using Tukey HSD tests.

Conclusion. Grounded in a comprehensive and integrative framework (FIT-Choice theory) and as part of a larger research project, this paper is a response to the need for more theory-based research on student teachers’ motivations for teaching. The typological approach is innovative and has been identified as a necessary research challenge (Richardson & Watt, 2010; Thomson et al. 2011).

This study adds to previous research on (student) teacher motivation since it offers evidence that there are empirically identifiable types among student teachers at the outset of teacher education, based on their professional engagement. Moreover, these different types of student teachers show varying motivations for teaching.

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### B13.2 Can education attract masters to the teaching profession? Development of the questionnaire for motives of masters for the teaching profession (MMTP)

Wil Meeus and Liesje Coertjens, University of Antwerp, Belgium

**Abstract**

Problem statement. Research into the motives of future teachers to aspire to a job in education is in the interest of many countries because of increasing teacher shortage (OECD, 2005). Insight into the motivation for the teaching profession is supposed to deliver
directions for actions to attract more teachers or to prevent teacher attrition (Watt & Richardson, 2008). Teacher education has an important role to play while it has the ability to submit the motivation of the students to a reality check and to provide support for the practice shock that often goes with it (Meijer, de Graaf, & Meirink, 2011; Rots, Aelterman, Vlerick, & Vermeulen, 2007). Research on the motivation of future teachers can help prevent burn-out or loss of commitment (Bruinsma & Jansen, 2010; Rots, Aelterman, Devos, & Vlerick, 2010; Struyven, Vrancken, Brepoels, Engels, & Lombaerts, 2012). Aim of this study is to develop a questionnaire on motives of starting student teachers following a robust methodology.

Conceptual framework. Several studies are completed regarding the nature of student teachers’ motives for the teaching profession. We adopted three methodological criteria to assess the existing studies, namely a thorough empirical foundation, a thorough factor analysis and a large respondent group. We think these criteria are indispensable for the development of a valid and reliable questionnaire on motives of starting student teachers. We found that no recent study meets all three criteria, although some studies comes close (Bastick, 2000; Watt & Richardson, 2007).

Making the assumption that motives may vary depending on the type of teacher that is addressed, we limit ourselves to a specific target group within a specific context: the starting student in the Flemish academic teacher education. Reason for this choice is the ongoing debate on the position of masters in Flemish education, recently highlighted by the discussion on the reform of secondary education (Smet, 2010). In Flanders master in all different subject domains have the ability to earn their teaching degree for higher secondary education by completing a one year teacher education program following their master’s degree.

Research question. Which motives do starting student teachers in the Flemish academic teacher education have for the teaching profession?

Research Method. This study focuses on the development of the questionnaire called MMTP (Motives of Masters for the Teaching Profession).

From 2004 to 2011 we asked starting student teachers in two Flemish academic teacher education institutions to describe their motives for the teaching profession. In each University five cohorts were surveyed, distributed over eight academic years. Each cohort consisted of between 100 and 200 students. In total over 1200 students participated in this empirical part of the study. All students were asked to individually write down any personal motives. These motives were listed. Through debate the list was adjusted and completed by each cohort.

All lists were brought together in one inventory from which the duplicate items were deleted. This resulted in a total of 148 items. The items were screening by an expert group following the principles of usefulness, uniqueness, generality and clarity. A 5-point Likert-scale was used ranging from 1 (very little important), 2 (little important), 3 (somewhat important), 4 (important) to 5 (very important). A number of demographic characteristics, selected by the expert group, were included in the questionnaire to be able to compare specific categories of future teachers. In 2012 the preliminary questionnaire was administered to a cohort of 150 students on their first day in academic teacher education. Factor analyses on these data is forthcoming.

Findings and conclusions. The result of the EFA will be presented and further steps in the
development of the MMTP will be discussed. A large-scale survey of all students of the five academic teacher education institutions in Flanders is planned in 2013. These data will be used for a confirmatory factor analyses (CFA). The final version of the MMTP will be compared with existing questionnaires and results of other recent studies.

B13.3 Pre-service teachers’ content and pedagogical content knowledge about rational numbers and their mathematics self-concept
Fien Depaepe, KU Leuven, Belgium; Nathalie Vermeersch, KHBO, Belgium; Dirk Janssens and Wim Van Dooren, KU Leuven, Belgium

Abstract
Problem statement. Investigations in many countries document on elementary and secondary students’ limited understanding in the rational number domain (Mack, 1990; Zhou, Peverly, & Xin, 2006). To effectively deal with students’ difficulties, teachers should have appropriate content knowledge (CK) (i.e., conceptual and procedural knowledge about the rational number domain), and pedagogical content knowledge (PCK) (i.e., knowledge of students’ misconceptions and of multiple representations to prevent and/or remedy these misconceptions). Yet, teachers’ CK and PCK is inextricably linked to the affective domain: Teachers’ confidence in their mathematical competencies also impacts their instructional approaches (Ball, 1990).

Research question. There is evidence that pre-service teachers’ CK and PCK in the rational number domain is limited. Related to their CK, pre-service teachers seem to lack mastery of the subject-matter they are supposed to teach for rational numbers (e.g., Merenluoto & Lehtinen, 2004). Studies on pre-service teachers’ PCK in the rational number domain are scarce. The limited number of studies reveal pre-service teachers’ difficulties in predicting students’ possible misconceptions in the rational number domain (Tirosh, 2000) and in applying appropriate representations that challenge students’ misconceptions about rational numbers (Ball, 1990). Studies focusing on differences in CK and PCK between pre-service elementary and pre-service secondary teachers revealed better CK and PCK scores for the latter (Ball, 1990; Merenluoto & Lehtinen, 2004). Moreover, the former demonstrated lower feelings of competence in mathematics (Ball, 1990).

However, a systematic investigation of the relationship between pre-service elementary and secondary teachers’ CK, PCK, and mathematics self-concept is missing. This study aims at ascertaining and relating pre-service elementary and pre-service secondary teachers’ CK and PCK about rational numbers and their mathematics self-concept.

Method. We developed a test to measure teachers’ CK and PCK in the rational number domain. The test consists of 48 items, covering several subdomains. Half of the items related to fractions, whereas the other half involved decimal numbers. Some items dealt with the concept of fraction or decimal number, whereas others concerned operations with fractions and decimal numbers. In line with Shulman’s (1986) conceptualization of PCK, we distinguished between two types of PCK-items: (1) knowledge of students’ pre- and misconceptions (student dimension) and (2) knowledge of instructional strategies and representations to make the subject understandable for students (instruction dimension). The content and format of the CK- and PCK-items is complementary.

Pre-service teachers’ mathematics self-concept was measured by means of the self-description questionnaire (Marsh, 1992). The scale for mathematics self-concept consists of
ten items (e.g., “I am quite good at mathematics”, “I find many mathematical problems interesting and challenging”) to be rated on an eight-point Likert scale. The test and self-concept scale were administered to 158 pre-service elementary teachers of three teacher training institutes and to 34 pre-service lower secondary teachers of two teacher training institutes. All pre-service teachers were in the second year of their three-year teacher training and had followed a course on (teaching) rational numbers.

Findings. Table 1 presents pre-service teachers’ performances on the CK-, PCK-, and mathematics self-concept-items.

Table 1. Pre-service teachers’ mean score (M) and standard deviation (SD) on the CK- and PCK-items and mathematics self-concept scale (MSC)

<table>
<thead>
<tr>
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<th>M</th>
<th>SD</th>
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<tbody>
<tr>
<td>CK</td>
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</tr>
<tr>
<td>Elementary</td>
<td>.77</td>
<td>.13</td>
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<tr>
<td>Secondary</td>
<td>.86</td>
<td>.12</td>
</tr>
<tr>
<td>PCK</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary</td>
<td>.57</td>
<td>.15</td>
</tr>
<tr>
<td>Secondary</td>
<td>.55</td>
<td>.13</td>
</tr>
<tr>
<td>MSC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary</td>
<td>5.08</td>
<td>1.11</td>
</tr>
<tr>
<td>Secondary</td>
<td>6.27</td>
<td>0.79</td>
</tr>
</tbody>
</table>

We observed that pre-service elementary and secondary teachers’ PCK was weaker than their CK. Statistical analyses revealed that pre-service elementary teachers performed significantly worse on the CK-items than pre-service lower secondary teachers (F(1,192) = 13.54; p < .001) and had a significant lower mathematics self-concept (F(1,192) = 35.33; p < .001) whereas no significant difference was found for PCK (F(1,192) = 0.80; p = .37). Correlation analyses revealed significant (at the p-level .01) positive correlations between pre-service teachers’ CK and PCK (for pre-service elementary and secondary teachers resp. r = .54 and .63), between mathematics self-concept and CK (resp. r = .55 and .63), and between mathematics self-concept and PCK (resp. r = .44 and .41). Thus, pre-service teachers with a higher mathematics self-concept score higher for CK and for PCK.

Conclusions. The study indicates limits in pre-service teachers’ CK and PCK knowledge regarding rational numbers, and suggests that CK and PCK are positively related to mathematics self-concept. Moreover, it reveals that pre-service secondary teachers significantly scored higher on CK and mathematics self-concept compared to pre-service elementary teachers, whereas no difference was found for PCK.

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**Session number: B14**

**Location: Room 1C**

**Time: 10.30 – 12.00**

**Movies, games and social media in education**

**Chair: Jeroen Bourgonjon**

**B14.1 Use of an educational movie as trigger for reflection on academic organizational cultures**

Tiiu Tenno, Asko Karjalainen and Blair Stevenson, Oulu University of Applied Sciences, Finland

**Abstract**

All academic organizations are made up of organizational cultures. Kezar (2001) suggests that the environments associated with these organizational cultures can be extremely...
challenging to navigate. Furthermore, academic organizations are remarkably resistant to change and are not easily managed from an educational leadership perspective (Fullan, 2001). The concept of shared meanings is a useful tool for understanding the foundation for behaviors in these environments. When an organization meets strong external pressures, the quality of the shared meanings between co-workers can be viewed as a crucial factor in successfully confronting these pressures, especially with the current context at many universities faced by tightening budgets and increasing competition.

In response to the challenges faced within the process of organizational change, video and ‘trigger films’ have been found to provide a stimulating tool for organizational development (Sloper, 1984). Similarly, Dickinson and Summers (2010) recommend the use of 3 to 5 minute, highly didactic videos to encourage engagement, whereas Schwartz and Hartman (2007) discuss the use of a ‘designed video’ in which the author plans the video’s components and features. Schwartz and Hartman (2007) further suggest that a designed video can support students’ seeing, engaging, doing, and saying.

In 2011, a course titled Higher education institutions – codes of laws, statutes and practices was offered at the School of Vocational Teacher Education at the Oulu University of Applied Sciences in Finland. This course was delivered to academic staff with the key objective to promote organizational consciousness and encourage participants to become active change agents in their own organizations. A more specific goal was to have participants reflect on their shared meaning structures about academic organizations in a multi-frame thinking. A key teaching method used during this course was the presentation of a designed educational movie used as a trigger to produce dialogue about the hidden social patterns and meanings in their own educational organizations. The designed video demonstrated explicit, real-life contexts by presenting unstructured problems in an academic environment that allowed course participants to reflect on their own challenges within an academic environment.

Data collection consisted of video recordings of the resulting conversation between the course participants after their viewing of the designed educational movie. Data analysis also involved content analysis of the discussions and the participants’ pre- and post-reflective assignments. Data analysis was further structured using an objective hermeneutic framework (Oevermann, 1983) to articulate and trace the social meaning structures discussed by participants.

Preliminary findings suggest that, prior to viewing the educational video, participants tended to analyze organizational situations or systems from a single perspective. After viewing the educational movie, multi-frame thinking concerning organizational cultures was observed among the participants. Participants’ reflections after viewing the movie also demonstrate an increased awareness of complex and challenging context within an organizational culture. Overall, these findings point to a conclusion that the use of an educational movie as a trigger may have significant potential to broaden viewers’ recognition of the implicit social meaning structures within their academic organizations.
The game of democracy. Exploring video games to inform contemporary discussions about civic education
Jeroen Bourgonjon and Ronald Soetaert, Ghent University, Belgium

Abstract Contemporary teacher training is inspired by an emancipatory perspective on education. The goal is to train teachers that are able to coach pupils and provide them with the necessary care in order for them to grow as responsible, independent, and critical citizens in a democratic and cosmopolitan society (Aelterman, 1995). It is generally agreed upon that teachers should take up an active role in realizing education. This requires – among other – an anthropologist perspective. In other words, teachers should be attentive to the broader culture, using these influences as an inspiration for setting up powerful learning environments, for evaluating their own teaching practice and for participating in contemporary debates about education. One such debate that is regaining a lot of attention recently, is civic education (Biesta, 2011). In this paper, popular culture in general and video games in particular, are explored in order to inform contemporary discussions about civic education. In “Cultivating Humanity,” Nussbaum (1997) makes the case for a particular norm of world citizenship that not just respects the worth of human life and our interconnectedness based on human capabilities, but also allows a variety of world views. She argues that this type of world citizenship requires three capacities that represent the essential goals of world citizenship: a self-examined life, respect for and knowledge about diversity and a cultivation of the narrative imagination. Like Booth (1988) and Rorty (1989), Nussbaum (1997) stresses the importance of literature because of its inherent qualities for representing specific circumstances and problems of people that are often very different from ourselves. This perspective is indebted to Burke, who metaphorically described literature as “equipment for living,” precisely because it sizes up situations in various ways and confronts the reader with correspondingly various attitudes. However, in an age of mass media and digitality, we are becoming increasingly aware that this function of literature – described as creating, problematizing and thematizing citizenship – is perhaps no longer unique. Could it be that it could be fulfilled by other media as well? This call for attention for popular culture is reflected in the work of Brummett (2006), Foss (JAAR), Ott (2008) and Gee (2007), who have extended Burke’s well-known description of literature as “equipment for living” (1941[1973] p. 304) to include new media such as newspapers, films and even video games. This type of analogous reasoning leaves us with an important question: If new media too can be considered equipment for living, and citizenship is a guide for living, then could it be that the new media promote citizenship? In this paper, we selected a medium that is very popular among young people – video games – and use them as a case to explore these questions. The main question: “Can video games stimulate an empathetic and cosmopolitan moral development?” is divided in three research questions: (RQ1) How is citizenship defined in contemporary scholarship?, (RQ2) What type of new scenes emerge around video games where expressions and lived examples of citizenship can be studied?, and (RQ3) What type of literacies and capital that could transform or support citizenship do gamers acquire while playing? By answering these three questions, we will be able to inform the current debates about civic education because after all, according to Biesta (2011): “The way in which young people make sense of their experiences—including their experience of citizenship
education—depends crucially upon their own perspectives which are, in turn, determined by the outcomes of previous learning and meaning-making” (p. 14).

| B14.3 | **Social Reading: How social media are changing literacies related to literature**  
Joachim Vlieghe, Ghent University, Belgium |
|---|---|
| **Abstract** | Until the mid-20th century, literacy was defined in terms of reading and writing printed literary texts. As the multiplicity and diversity of media, culture and language grew, this notion of a single univocal literacy became increasingly problematic (New London Group). The concept of literacy had to be redefined as “multiliteracies”, a concept which refers to institutionally stabilized and multimodal uses of language. These conventionalized uses of language mark and prescribe a multitude of “distinctive ways of acting, interacting, valuing, feeling, dressing, thinking, believing, with other people and with various objects, tools, and technologies, so as to enact specific socially recognizable identities engaged in specific socially recognizable activities” (Gee, 155). Thus, the concept of multiliteracies refers to sets of instructions on how to act and talk within specific sociocultural institutions by using particular media. Stated differently, multiliteracies express through language a set of motives for acting which people can ascribe to. When new media emerge and converge with “older” media, these instructions and motives change. In this paper, we focus on literacies relating to literature and how they are being transformed by the social media system. We direct our attention exclusively towards the phenomenon of “social reading” and “social reading platforms”. We define social reading platforms as internet-based services that allow individuals (a) to construct a public or semi-public profile within a bounded system, (b) to articulate a list of preferences and experiences related to literature as well as a list of other users with whom they share these preferences and experiences, and finally (c) to view these lists and those made by others within the system (see also: boyd & Ellison’s, 211). We have identified 27 unique platforms that comply with this definition. From a rhetorical perspective, language use is considered an indicator of people’s perception of a situation and the choices and actions they see available to them (Foss). Tools from rhetorical criticism enable research to focus on the situatedness and motive-generating functions of language use (Brummett). Kenneth Burke’s Dramatistic Pentad is an important tool for “analyzing discourse by focusing on how it attributes motivation to human action” (Blakesley, 32). Burke’s Dramatistic Pentad incorporates and divides this question into five distinct segments or elements: the act (what happens), agent (who does the act), scene (the setting in which an action takes place), agency (the means by which the act is carried out), and purpose (the goal or objective of the act) (Burke). The technique of pentadic cartography is an addition to this tool which was developed in order to “locate the featured term[s] that coordinate transformation of one vocabulary into the terms of another at pivotal sites of ambiguity” (Anderson and Prelli, 80). By applying the technique of pentadic cartography research can identify the strategic points of ambiguity and to trace transformations and shifts in the uses and meanings of concepts relating to media use and sociocultural participation. While various perspectives can be analyzed successively when using the techniques of pentadic analysis and pentadic cartography, we only focus on the perspective of the developers of social reading platforms. Based on a study of social media participation,
danah boyd points out that institutionalization of socio-cultural practices is influenced by ongoing debates and negotiations as well as developers’ efforts to monitor and regulated these practices (boyd, 95). By focusing on the discourse of developers we identify the attributed motives for innovating the literary system by constructing, design and hosting social reading platforms. Because this discourse functions as a monitoring and regulating mechanism, it also informs us about how participants of social reading platforms are instructed to act and talk.

Our research shows how concepts related to literary phenomena are changing within the “social media” system. In the traditional literary system, “the acting possibilities of actors are institutionally distributed onto four action dimensions: production, mediation, reception, and post-processing” (Schmidt, 124). In the “social media” system, however, literary phenomena are redefined in terms of continuous “post-processing” which transforms the relationships between “production”, “mediation” and “reception”. The changes indicate how developers actively seek to change the literary system by reducing the notions of hierarchy related to it. Social reading platforms are presented as democratic social spaces where people can easily switch position and are encouraged to try out multiple roles.
Introduction. A central theme in the improvement of schools (Schleicher, 2011) is that education systems need expert teachers, teachers who are not only expert in their pedagogic practice and ensure effective learning experiences for learners but who can also support the development of other teachers. Consequently, education systems need to develop strategies and processes to identify, support and sustain those teachers who can contribute to the institutional improvement of provision. The focus of this discussion room is on exploring strategies to recognize, support and reward expert teachers. The discussion room will explore a number of questions:

How do we define the expert teacher?

There are different definitions of expert teacher within and across education systems but can we identify what aspects might be common across these definitions. Further, what should we include in an understanding of the expert teacher: pedagogic expertise, subject knowledge, interdisciplinary understanding, practice, research, personal attributes, technical aspects of teaching, understandings of, and engagement with the wider political and philosophical issues of education?

What do we understand as teacher expertise?

From both academic and policy explorations the idea of the expert teacher is still loose - which may be part of its strength. However, we can probe the idea of an expert teacher further by examining the concept of ‘expertise’. There are a range of definitions we can draw on here: ‘stage models’ of expertise where a teacher would go through a series of developmental stages notably Dreyfus and Dreyfus’s (1986) model. There has been some work on the ‘expert teacher’ most notably David Berliner’s work (1988, 2001, 2004) who also suggests a stage model of development. However, such ideas need to draw from a wider body of work on the nature, and development of expertise within professions. Berliner (2004) drew from Glaser (1988) work on expertise and cognitive functioning, which has been used in medical education. Other models seek to describe the characteristics of expert practice. In Schon’s (1983) notion of ‘reflection-in-action’ the experienced or expert practitioner constantly reads the environment or problem and makes subtle adjustments to ensure a successful outcome. Hammerstein (2006) points to what might seem to be paradoxical in the practice of expert teachers: they display high degrees of efficiency as they perform variety of activities skilfully but at the same time they readily break these routines and rules by being innovative and so move beyond their existing expertise. Collins and Evans (2007) have these two categories of expertise: ‘interactional expertise’ and ‘contributory expertise’. Their category of ‘contributory expertise’ is akin to what we commonly think of as ‘expertise’ – for example the expertise of a leading scientist in a particular field. The other category ‘interactional expertise’ comes from being immersed in a community of practice. In this model of expertise, the development of necessary tacit knowledge is through participation in genuine communities of practice. We need therefore to consider how the expert teacher generates and leads opportunities for the development of interactional expertise.
What are ways of recognizing and rewarding expert teachers?
There are some significant issues relating to how we recognize accomplished teaching, what impact should we be looking for and in what areas and finally, how would we evidence impact; questions which reveal significant tensions. The question of where the expert might sit in frameworks for professional accreditation and academic awards and the possibility of an advanced status for some teachers should be considered. Achieving an award or qualification raises questions about teachers maintain and refresh their practice. There is a range of schemes and programmes currently being established and developed in different educational systems internationally which recognize, certify and/or support the development of accomplishment/expertise in teaching (Forde and McMahon, 2012).

Critical issues in higher education
Michael Kompf, Brock University, Canada; Pamela Denicolo, University of Surrey, United Kingdom; Andrew Short, Patrick Tierney, Nicola Simmons, Brock University, Canada; Lori Goff, McMaster University, Canada; Rahul Kumar, Brock University, Canada; Chris Park, Shantal Woolsey, Mohawk College, Canada; Christine Arnold, University of Toronto, Canada; Wendy Arscott, Christina Skorobohacz, Brock University, Canada; Catherine O’Rourke, Loyalist College, Canada and Ewelina Kinga Niemczyk, Brock University, Canada

Abstract
For many years Kompf & Denicolo have been involved in the practises of higher education. Our experiences have included front line teaching, the thrills and threats of tenure and promotion and the transition into carrying administrative responsibilities. While our combined locations do not quite span the globe (Kompf- North America & Denicolo- UK & Europe) our activities and connections through world-wide organisations have led to many interesting conversations about the similarities and differences between and among stakeholders that invested in the various institutions around the world that develop and deliver higher education.
Approaching such a topic as Critical Issues in Higher Education is problematic because of the gap between framing “critical” topics and time required for publication of such opinions and research. A near-daily drama of change in policies, practises and possibilities in higher education unfolds on the meeting grounds of increased demand for services, advances in and availability of information and communications technology (ICT) and the transition from largely publicly-funded organisations with a education for the sake of education philosophies to organisations based on competitive commercialisation driven by multi-layered fiscal realisations and practises.
The thirty or so years of participation in and observation of higher education we can each claim has afforded a few life and professional life observations. History is important. The often cited adage that failure to acknowledge the lessons of history leads to repetition has only proved useful for predicting a limited range of socio-cultural circumstances as globalisation, population diversification and the growing strength of social justice movements have identified nearly infinite educational needs. However, in societies where the formalities of learning and teaching are in the early stages of development, lessons can be learned from those who have gone before and now face the positive or negative consequences of decisions or directions taken. Constraints of economics, culture, technology and geography no longer represent the challenges of time before ICT.
Education and what it means has entered a new era in which the primary focus on education for the sake of education is strained. An educational free-for-all, in the sense of a no-holds-barred fight, seems in place as competition for market share, effective branding exercises and movement towards a client-based delivery of educational services (on demand as demanded) has been fuelled and confounded by litigation, accreditation, transfer credits and matters of patents, copyrights, ownership and monopoly. The link between education and financial well-being has co-opted as the key to personal success. Unfortunately, the degree pursuit, often called the “paper chase” has become competitive for learners seeking scholarships, awards and entry into graduate school. This transition indicates movement from becoming well educated to employability potential paralleling much institutional retooling and sustenance of enhanced reputation and fiscal viability.

Within these circumstances, learners still apply, are accepted into programs and study to degree completion. Professors still profess in accordance within whatever guidelines define the (un)certain boundaries of disciplines, institutions and governments. While the largest percentage of learners merge back into society in professional and other capacities, some persist and gain entry into the academy and the professoriate. These higher learners in higher education represent the next generation of the academy. Neil Postman’s sentiment that “children are the living message we send to a time we will not see” applies no less to new scholars. The gradual raising of intellectual consciousness that hopefully accompanies advanced scholarship grows to appreciate not just the what of a topic but also the why, how, when, where and what’s next aspects. Growth in understanding the terms and conditions of learning and teaching in higher education means developing a meta awareness of content, context and consequence in which academic ego-centrism is surpassed by critical thought, communication and social conscience.

Curriculum is not neutral, neither are learners, teachers or the societies that provide the raison d’être for education systems. We endorse the sentiment that teachers are best measured by their students and acknowledge the responsibility and privilege of working and growing with serious, dedicated scholars who feed and are fed by ideals of deeper inquiry and understanding of shared concerns.

The ideas and papers explore critical issues that illustrate the diversity of voice, venue and value of the contributors and draw on work recently published in a volume titled Critical issues in higher education (Kompf & Denicolo, 2012). Presenting authors will used the chapters published in this book as a base for comparison of the circumstances faced when writing the chapter and illustrate such movements as have been made since their work’s inception. Reflections on their work will assist illustrating the rapid evolution of higher educational thought and practice.
**SYMPOSIA**

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<td>Views from deans’ offices: International perspectives on issues relating to teacher education</td>
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**Associate dean/dean participants:**
Renée Clift, University of Arizona, United States; Annette LaGrange, University of British Columbia, Canada; John Loughran, Monash University, Australia; Geoff Mills, Southern Oregon University, United States; Lily Orland-Barak, University of Haifa, Israel; Kari Smith, University of Bergen, Norway; Frances O’Connell Rust, University of Pennsylvania, United States; Chris Clark, Arizona State University, United States; Cheryl Graig, University of Houston, United States and Douwe Beijaard, Eindhoven University of Technology, The Netherlands

**Abstract**
Multifaceted. Ambiguous. Convoluted. Non-standardized. These are just some of the words that describe the work of associate deans and deans of education. From university to university and country to country, no two dean/associate dean positions are alike. Yet, all are called to provide leadership where the preparation of tomorrow’s teachers is concerned. This session brings together deans and associate deans from six different countries to take up critical questions and issues having to do with teacher education. Each of the associate deans/deans previously was on the frontlines of teacher preparation (preservice and graduate education) before his/her most recent appointment. But upon arriving in the associate dean’s/dean’s office, teacher education, teacher educators and teacher candidates looked somewhat different from the other side of the desk. This session centering on teacher education takes up for discussion the following sub-themes from deans’ and associate deans’ points-of-view: diminishing resources, improving programs, creating opportunities, establishing stakeholder partnerships; competing/conflicting agendas, shifting perspectives, changing relationships, maintaining identity, and sustaining vision.

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<tr>
<td>Symposium</td>
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<td>ISATT research interests over time (Anniversary book strand theme)</td>
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**Abstract**
In this symposium presentation, prominent research agendas of ISATT members will be featured from historical and contemporary perspectives. Representative samples of particular research lines will be shared. The topics surveyed and showcased include the paradigm shift, lives of teachers, moral aspects of teaching, teacher learning, teaching and school reform, and leadership.
Paradigm shift
Anneli Lauriala, University of Lapland, Finland

Lives of teachers
Christopher Day, University of Nottingham, United Kingdom

Moral aspects of teaching
Auli Toom, University of Helsinki, Finland and Jukka Husu, University of Turku, Finland

Teacher learning
Freema Elbaz-Luwisch, University of Haifa, Israel

Leadership
Michael Schratz, University of Innsbruck, Austria and Isabel Rots, Ghent University, Belgium

Teaching and school reform
Maria A. Flores, University of Minho, Portugal

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PAPER PRESENTATIONS

Session number: C5 | Location: Room 1A | Time: 13.00 – 14.30
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Paper presentations
Practices in school organizations
Chair: Geert Kelchtermans


c5.1 Agency-centred coupling – A combination of sustainable management practices in tightly and loosely coupled organizations
Päivi Hökkä and Katja Vähäsantanen, University of Jyväskylä, Finland

Abstract
Over recent decades educational restructuring has become a world-wide phenomenon. This can be seen in the transformation in patterns of governance, deregulation, marketization, consumerism and the introduction of new management principles derived from the world of business (Goodson & Lindblad, 2010; Moos, 2009). In parallel with the adoption of new public management (NPM) principles, the transformations in educational systems are also conceptualized as a movement from ‘loose’ to ‘tight’ coupling patterns (Meyer, 2002). Traditional loosely coupled organizations consist of small-scale separated and self-governing groups. In such organizations, individuals and groups are thus tied together loosely. Management operates via a "flat" management culture, i.e. one in which weak control is exercised and the strong autonomy of teachers is emphasised (Weick, 1976). In tightly coupled organizations, the emphasis is increasingly on strong, strategy-oriented control and management, aiming at maximum profitability (Meyer, 2002; Moos, 2005). Thus, teachers are being increasingly supervised and monitored, to the extent that external evaluations now control the work of the individual teacher. Different professional groups also have to co-operate closely with each other and with upper levels of administration (Meyer, 2002; Moos, 2005).

Given the increase in NPM and tight coupling principles in education, it is vital to
understand what this means for teachers and their work, and this will involve issues that
have been somewhat neglected in empirical studies. This paper examines how two Finnish
educational organizations with different management cultures provide constraints and
possibilities for teachers’ agency. In theoretical terms, we understand that practising
agency means that teachers actively negotiate and renegotiate the conditions and the
contents of their own work, and that they have an influence on community and
organizational issues (e.g. Pyhältö et al. 2012; Vähäsantanen et al. 2008). The paper further
addresses how teachers’ agency is related to (i) organizational and educational
transformations, (ii) teachers’ professional development and identity negotiations, and (iii)
teachers’ commitment to the educational organization and well-being at work.

The issues discussed here concerning teachers’ agency emerge from two research projects
based on 38 interviews with Finnish teachers working in a vocational institution and a
university department of teacher education. These teachers varied by age, subject matter,
and length of work history in the organization. Interviews were analyzed via different
qualitative approaches, applying narrative analysis, discourse analysis and thematic analysis
(e.g. Braun & Clarke, 2006; Riessman, 2008; Wetherell, 1998).

On the basis of the interviewed teachers’ accounts, the organizations were identified as a
tightly coupled organization, and a loosely coupled organization. The findings showed that
in the loosely coupled organization the teachers’ sense of agency was strong, because of
low hierarchical separation and weak control over the teachers’ work. It appeared that
when the organization supported the agency of teachers as individuals, it also created
obstacles for organizational and collective learning and development. However, the
organization offered ample opportunities for teachers to practise their professional
orientations, and to develop professionally. Furthermore, the teachers’ commitment to the
work organization was extremely strong. By contrast, the findings revealed that in the
tightly coupled organization the teachers seemed to manifest a weak sense of agency
within a hierarchical and bureaucratic management culture. Major changes in education
appeared to be achievable through the combination of administrative regulations and
teachers’ weak agency. However, many teachers faced restrictions on practising their
professional orientations or on developing themselves professionally. There also seemed to
be some serious threats to teachers’ well-being and to their commitment to the
organization.

Overall, the findings showed that loosely and tightly coupled organizations had their own
strengths and weaknesses, with implications at both individual and social levels. This would
imply a need to find new models to lead educational organizations through adopting
practices from both loosely and tightly coupling models. In order to achieve a balance
between these models, we suggest that the management of educational organizations will
best be approached through notions of agency-centred coupling. This means that the
priority should be given to communication, collaboration, and interaction between actors
within different levels of the organization. This could enhance sustainable educational
change and collective learning. In conjunction with couplings, the promotion of teachers’
agency must be considered indispensable in educational management. The promotion of
agency will be important in terms of the renegotiation of professional identity,
commitment, and well-being at work.
C5.2 Curriculum change, school policy and teaching practice: Empowering educational leadership through teacher collaboration in a new curriculum initiative

Chandni Nair, Diocesan Boys' School Primary Division, Hong Kong

**Abstract**

This paper presents a three-year case study on the process of teacher collaboration and distributed leadership during a new curriculum initiative known as the Inquiry Based Learning Week (IBLW) in a Hong Kong primary school. The researcher in this case study is the Deputy Headteacher in charge of academic studies in a primary school. The school wanted to nurture skills that permitted students to become independent learners. The inquiry process would enable students to think of questions to find appropriate resolutions to those questions as well as gain new knowledge. Students were expected to work in groups during the IBLW. These new curriculum initiatives were to be a big change for the teachers who were brought up with traditional ways of teaching.

Research has shown teacher collaboration is important to change teachers’ practices and positively affect student learning (Borko, 2004). Curriculum linked professional development research (Fishman et al., 2003; Slotta, 2000) has shown that teachers are prepared effectively to enact curricula rather than attend distant workshops with respect to practice, both in terms of instructional focus and time of enactment. Workshops were held for the teachers that included introducing the inquiry based concepts, their expected role as a facilitator during the IBLW, student group dynamics and expectations of students outcome at the end of the project. Dee et al. (2003) emphasize the need to generate psychological empowerment among educators. In order for administrators to effectively convince educators to adopt and implement innovative inclusive strategies, it was essential that they instill a genuine sense of purpose in teachers (Harpell & Andrews, 2010). Professional development had to be a tool focused on improving student outcomes as opposed to one for simply meeting administrative mandates (Sparks, 2002). It was important to harness and mobilise the resources needed to support the transformation (Spillane et al., 2004) and that those schools with distributed leadership would have more staff who were knowledgeable and take responsibility for the improvement of educational outcomes (Robinson, 2008).

This study explores the following research questions: 1) What challenges have teachers had in the process of teacher collaboration in the new curriculum initiative? 2) To what extent have teachers been supported professionally and by school policy to cope with challenges of the curriculum change? 3) To what extent did the process of teacher collaboration empower teachers’ educational leadership at school? Various methods were adopted to collect data. Non-participant observation was done by the researcher during the IBLW to observe teachers in their roles as facilitators and student interaction and learning. Focus group interviews were conducted with 8 teachers who were subject representatives in the Curriculum Development and Academic Affairs Committee and 12 students from all grade levels. Questionnaires were given out to 900 students and 75 teachers at the end of the IBLW from the academic years 2009-2010 until 2011-2012. Guskey’s five critical levels of information to effectively evaluate the professional development programmes (2002) were used: Participants reactions, participants’ learning, organisation support and change, participants’ use of new knowledge and skills and student learning outcomes.
Focus interviews from the first year showed that teachers felt that they found it difficult to adapt to the new curriculum change and were unsure how to be the facilitator. Teachers found it very challenging for having to be open to students’ questions that might not be related to their subjects areas. The Deputy Headteacher had taken numerous measures to fully support teachers, such as special briefings, peer group discussions and purchasing resources. Teachers initially had to be guided through every detail of the IBLW. They had to work collaboratively with different teachers to plan the daily schedule, design various inquiry based activities and had to do daily evaluation. The collaboration process was important to find support and ideas from other teachers and reduced individual pressure on themselves. Teachers’ skills of classroom and time management were crucial in ensuring the success of the new curriculum initiative. Focus interviews done with teachers in the final year revealed that they developed confidence of their facilitating skills. Student feedback was positive as they were fully involved throughout the whole learning process. Questionnaire data showed substantial improvement in both teachers and students opinions about the IBLW across the 3 years.

This study highlights the importance of effective teacher collaboration which in term promotes teacher empowerment. It helps both school administrators and teachers to be more aware of the challenges of implementing new curriculum initiatives and sheds light on how teachers can effectively achieve professional development by actively engaging in curriculum initiatives in school settings.

C5.3 Implementing mentoring practices in school organizations: Combining sense-making and neo-institutional theory
Virginie März and Geert Kelchtermans, KU Leuven, Belgium

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| The transition from teacher education (“student of teaching”) to the actual professional practice (“teacher of students”) is widely portrayed in the literature as a challenging career phase (e.g., Beijaard, Meijer, & Verloop, 2004; Flores & Day, 2006; Grossman & Thompson, 2004; Kelchtermans & Ballet, 2002). This process of socialization implies beginning teachers having to manoeuvre within the social, cultural and political landscape of the school’s professional network. Since the late 1980s, the need to provide specific support to beginning teachers became widely acknowledged in the literature on teachers’ professionalism. This growing awareness was mirrored in Flemish schools putting in place a wide range of specific induction programs in which more experienced teachers voluntarily provided support to beginning teachers. In 2006 these practices were institutionalized by a new Decree on Teacher Education. Schools received specific resources (so called “mentoring hours”) which allowed them to implement and refine induction programs and to include forms of mentoring as part of teachers’ formal contract. Drawing on concepts from two complementary traditions - sense-making theory and neo-institutional theory - this paper focuses on how the increased policy attention towards beginning teachers and the use of policy measures (i.e., mentoring hours) in Flanders has stimulated schools to refine, develop or implement induction programs (and forms of mentoring) as a specific case of educational innovation. Previous research on educational innovation has most amply documented that the implementation of innovations (i.e., induction programs) and new roles (i.e., mentors of
beginning teachers as an important form of teacher leadership) in schools can take very diverse and often not sustainable forms, reflecting an inherent tension between stability and change in organizational processes (Spillane, Gomez, & Mesler, 2009). Over the last two decades, educational research has strongly emphasized the central role of sense-making in implementation processes (see e.g., Coburn, 2005; Hopkins, 2001; Spillane, Reiser, & Reimer, 2002). The way in which teachers experience an innovation and the degree to which they implement change are determined by individual and social processes of sense-making. Conceptualizing this “sense-making”, we draw upon the notion of “personal interpretative framework”, as developed by Kelchtermans (2009). Criticisms of sense-making, however, claim that the theory overlooks the embeddedness of sense-making in social space and time (Weber & Glynn, 2006). Therefore, a proper analysis of implementation practices needs to acknowledge that processes of sense-making are enabled and constrained by various organizational and institutional factors. The neo-institutional theory provides a strong framework to include these aspects and processes as well because it concerns itself with the processes through which artifacts, rules, norms, and routines provide organizations and their actors with meaning, value, scripts that may govern individual and organizational behavior (DiMaggio & Powell, 1983; Meyer & Rowan, 1977, 1978, 1983; Scott, 2008).

In this study, we were interested to understand how actors within organizations were constrained and enabled by the co-existing and competing logics as they implemented induction programs and mentoring practices. More specifically, we use sense-making theory to characterize how school actors make sense of this innovation, and we draw on neo-institutional theory to explain the relationship between the broader institutional context and the induction programs and mentoring practices in school organizations. The research questions were formulated as follows:

1) How are the mentoring hours and their actual implementation perceived and motivated by the people who enact it? How does this sense-making determine the actual implementation practices?

2) What kind of broader cultural norms are embodied in those mentoring hours? How does this determine the actual implementation practices?

3) What kind of organizational and institutional factors determine the actual implementation practices?

Two secondary schools – representing “examples of good practice” of the policy on mentoring - were selected as sites for qualitative-interpretative case study research. Data was collected with the use of semi-structured interviews with key actors (4 experienced teachers, 4 beginning teachers, 5 mentors and 4 principals), observations and document analysis (artifacts). Systematic interpretative data analysis (Kvale, 1996; Miles & Huberman, 1994) was used to unravel the practices and their rationale in relation to changes in (funding) procedures, policy logics, etc. Preliminary results show how individual strategic responses as well as institutional and structural factors frame the actual implementation of mentoring practices. The data analysis further reveals three initial findings or tensions: 1) power versus control: illuminating beginning teachers’ micropolitical action; 2) macro versus micro: understanding implementation practices from the perspective of the organizational field; and 3) stability versus change: defining school organizations as characterized by stabilizing- as well as change-driven processes.
Session number: C6  
Location: Auditorium 3  
Time: 13.00 – 14.30

Paper presentations  
Reflections on teacher education  
Chair: Mieke Lunenberg

C6.1  
Trick or treat? Developing and supporting self-study of teacher education practices research  
Eline Vanassche and Geert Kelchtermans, KU Leuven, Belgium

Abstract
Purpose and research context. In this paper, we report on the critical issues in supporting self-study research. The research setting of this paper is a two-year collaborative self-study project in which six teacher educators enrolled in the process of researching their practice using self-study methodology. ‘Self-study’ methodology is used here as a descriptor of the intentional, systematical investigations of practice undertaken by teacher educators in order to improve their practices and their understandings of these practices, while simultaneously, informing the scholarship of teacher education (a.o. Cole & Knowles, 1998; LaBoskey, 2004). Using a self-study approach, teacher educators want to make explicit and validate their professional expertise and hence, at the same time, contribute to the advancement of knowledge in teacher education. Their self-study projects were designed in close collaboration with trained researchers (i.e. the authors of this paper). The reason for this is that the majority of Dutch teacher educators hold a teaching-only position working in non-university based institutions which have predominantly a tradition of professional training and far less a research culture, including staff with research expertise or research experience. Hence, the participants could not lay claim to the full repertoire of skills, knowledge, and expertise necessary for conducting rigorous inquiry into practice.

The facilitation entailed a combination of buying out research time from the participants’ daily job (10% or four hours a week), setting up the group, and managing the process. More concretely, we organized monthly meetings with the three-folded aim of (1) informing the teacher educators/researchers upon the theory and practice of self-study; (2) coaching them in the design, implementation, and analysis of their study; and (3) providing tools for reflection and discussion. These group meetings were complemented with individual support through e-mail, telephone, and one-on-one meetings with the facilitators (both on-site/off-site).

Methodology. We carefully documented the facilitation process using a range of qualitative methods. Firstly, the meetings were documented by voice-recording. Secondly, every meeting was based on a detailed, written ‘scenario’ which contained the rationale of the facilitators’ choices on the content and pedagogy of that meeting. Thirdly, a written report was made of every meeting. Fourthly, the facilitators used a research log and de-briefing sessions to keep track of developing interpretations, hypotheses, feelings, frustrations, etc. in the course of the project.

We analyzed these data using a matrix as an analytical tool to systematically reconstruct: (1) the actual program of every meeting (what?); (2) the goals for that meeting (why?); (3) the rationale underpinning the content and pedagogy of that meeting (why in that way?); and (4) the documents used in that meeting. Taken together, the matrix reconstructed and made explicit our decision-making process as the facilitators of a group of self-study researchers (the actual actions and its underlying rationale).
Findings. The analysis resulted in the description of eight statements reflecting critical issues in facilitating self-study research. These statements are substantiated by referring to recent literature and segments of data from the project (i.e. excerpts from the matrix, transcripts of conversations, etc.).

1) The structural working conditions (in terms of time for the study and support from the teacher training institution) are crucial in the process of designing, implementing, and analyzing a self-study;

2) Be conscious of the possible tensions between the individual self-study research and the priorities and concerns of the teacher training institution;

3) The process of writing a self-study project is not only a technical matter or skill, but also a way to deepen the analysis and refine one’s understanding;

4) Stimulate self-study researchers to go ‘public’ and move beyond the borders of the ‘safe’, collegial project environment;

5) Be conscious of the possible tensions between establishing a ‘safe’, collegial project environment and the critical, systematic research attitude implied in self-study research;

6) The facilitation may have the un-intended side-effect of a relationship of dependence;

7) Simulate consulting ‘external resources’ during the process (i.e. research literature, self-study researchers, etc.);

8) Explicitly bring in theoretical concepts and frameworks as tools to move beyond the description of practice to the analytical reconstruction and analysis of it.

Relevance. In the remainder of the paper, we develop a perspective on research partnerships based on a culture of ‘similar commitment’ and embedded in a continuous critical dialogue, thereby acknowledging the distinctive –yet complementary- expertise each partner holds (extensive practical knowledge or methodological-technical skills and expertise). The findings prove valuable not only for the process of facilitating self-study research, but also for supporting broader initiatives with the explicit aim of professional learning/development (e.g. professional learning communities, practitioner inquiry, etc.).

C6.2 Dutch teacher educators’ perceptions of theory

Daniel White, Southern New Hampshire University, United States; Paulien Meijer, Larike Bronkhorst University of Utrecht, The Netherlands and Helma Oolbekkink, Radboud University, The Netherlands

Abstract

Self-Study and formal theories. Teacher educators’ professional development has recently gained scholarly attention. One increasingly popular form of professional development is the “self-study.” According to the literature, some teacher educators valued self-study to add meaning and critique to their socialized routines or to model inquiry-based habits for pre-service candidates (Loghran, 2007). Others, acknowledging the non-existence of standardized teacher education professional pathways, participated in self-study to cement a firmer professionalizing foundation (Lunenberg, Zwart, & Korthagen, 2010). Regardless of the motivation or the approach, teacher educators’ inquiries prompt self-examinations of how their respective practice is informed by formal theories.

Formal learning theories: A valued construct? Teacher education programs continue to value formal theories (FTs) (Darling-Hammond, 2005; Levin & He, 2008). Introductory
courses address how behaviorism, constructivism, and other learning theory "isms" have influenced the field. Intermediate stages see candidates fashioning and implementing behavioral objectives. Nearing completion, candidates align portfolio artifacts with FTs or report on perceived "gaps" between theories and pre-service practice (Kosnick, 2008; Yuksel, 2007). Furthermore, national accrediting bodies (i.e., National Council for the Accreditation of Teacher Education) sanction theoretical encounters and encourage programs to produce candidates’ who competently integrate FTs into their respective curricula (NCATE 2010 Standards 1b; 3b).

Pre-service teachers, however, do not value FTs (Anselmi, 2002; Grant, 2000; Holt-Reynolds, 1992; Landrum & Cook, 2002; Moje, 1997; Zou, 2000). Pre-service teachers in these studies characterized the FTs they encountered as too abstract, static, or distant from personal experiences to render them meaningful – a valued attribute within current constructivist-minded preparation programs (Calderhead, 1992; Korthagen, 2002; Marland, 1998).

Several teacher educators contend that FTs have depreciated in value stemming from the multiple ways it has been understood and defined. Thomas (1997) asserted that theory has been represented as everything from "describing simple intellectual endeavors" – akin to the cognitive organization of experience that make implicit theories explicit – to the employment of formal scientific explanatory statements that account for classroom phenomena (p 72). Chambers (1992) punctuates this adding, “Theory’s utility would be at risk if a streamlining of its definition does not occur” (p.78). Though streamlining theory is not our focus, our field would benefit from learning more about how these seminal formal structures are considered by teacher educators.

Central research question. This study is guided by one singular question: How do teacher educators construct meaning around formal theories? Capturing a wide range of teacher educators’ perceptions may better define how we believe theory should be represented and taught in our field (Cochran-Smith, 2005; Pajares, 1992) These findings may positively impact how our peers approach formal theory within their pre-service instruction in the hopes of reducing candidates’ negative dispositions toward it (Doerr, 2004; Morine-Dershimer, 2006).

Methods. This is phenomenological and qualitative line of inquiry explores how teacher educators have made sense of theory. The authors used purposeful sampling to identify and interview 12 Dutch teacher educators volunteering to participate in individual 60-minute, semi-structured, tape-recorded sessions. The audio recordings were transcribed, data were coded, and themes emerged. These themes produced findings that are shared below.

Findings. Three major themes emerged from the data. First, participants held that formal theory only gains shape when related to experience. Some participants held that practice is “a canvass upon which theoretical ideas are colored,” or take form. Hence, representations of theory conventionally employed in teacher education programs take “map onto the reality of individuals’ experiences.” Interestingly others shared that experience had to be “distanced” from one’s practice/experiences in order to have both make more sense in their respective ways.

Second, participants held that formal theory choices are influenced by personal experience, outside of class. Seemingly, participants are fully aware that what they their personal
experiences as a learner (in school and higher education settings) directly impact how formal theory is integrated into their teacher education practices. Participants were able to pinpoint occurrences in their professional lives (distant past or very recently) in which they healthily struggled with formal theories in ways they found meaningful.

Third, participants shared that they healthily struggle with the notion of when to introduce formal theory to students. The majority of participants prefer allowing their pre-service teachers’ teaching and learning accounts to be documented and then categorized under sanctioned learning theories. This sequence allows for a heightened level of “personal-professional integration,” as one noted, to occur, once formal structures are introduced. Others claimed that it is important to introduce the conventional “tools of the trade,” and present concepts that align with professional expectations.

### C6.3 \textbf{An international comparison study of signature pedagogy for clinically-rich teacher education}

Diane Yendol-Hoppey, University of South Florida, United States

**Abstract**

This session presents an analysis of articles published during the last 5 years in the Journal of Teacher Education, School-University Partnerships and Teaching and Teacher Education in search of an emerging signature pedagogy of clinically-rich teacher education. The goal is to provide an overview of the nature of teacher education pedagogy within and across international contexts in order to encourage conversations about the strengths and weaknesses of our current practices in light of Shulman’s construct of Signature Pedagogy.

### C7

**Development of 21st century skills: Illustrative cases**

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<td><strong>Development of students’ critical thinking and reasoning skills through argument mapping with the use of rationale™ software</strong></td>
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<td>Yiannis Vassiliades and Mary Koutselini, University of Cyprus, Cyprus</td>
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**Abstract**

Reasoning is a central component of critical thinking (Butchart, Forster, Gold, Bigelow, Korb & Oppy, 2009; Ennis, 1987; Fisher & Scriven, 1997; Kuhn, 1991; Moore & Parker, 2007; van Gelder, 2001) and an important social dexterity for the future active citizens of democratic societies since it is involved in all beliefs of individuals, in their judgments, in their conclusions and in the way they face their everyday problems (Kline, 1998; Kuhn, 1992). Many studies have shown that students are able to develop reasoning but often face difficulties associated with how they construct, organize and present their arguments (Andriessen, 2006; Bell, 2004; Erduran, Simon & Osborne, 2004; Felton & Kuhn, 2001; Jimeinez, Rodriguez & Duschl, 2000; Kuhn, 1989, 1991, 1992; Kuhn & Udel, 2003; Sandoval, 2003; Suthers, 2003).

The typical format for the presentation of reasoning is prose (e.g. arguments found in newspapers, books or internet resources). Extracting the structure of the relationships in a reasoning as typically presented in prose, however, is very difficult (van Gelder, 2002). Van Gelder (2002) suggests argument maps as a way to develop and present arguments.
because they are more readable and comprehensible than prose. An argument map is a visual representation of an argument that immediately identifies claims, reasons and objections. Argument maps require less interpretation since all relationships are made completely explicit using simple visual conventions. They can be understood more easily via colours, shapes, arrows position in space, and other visual clues and they are well suited to the non-sequential structure of most arguments (van Gelder, 2003). Relevant research shows that the ability to construct argument diagrams improves students’ critical thinking skills (Harrell 2004, 2005; Twardy 2004; van Gelder, 2001, 2003). Despite their effectiveness argument maps has never really been used as a practical tool for real reasoning or deliberation. The main reason, among others, is that their creation with manual technologies (pen and paper or white boards) is both difficult and time consuming. Using software specifically designed to support argument mapping such as Rationale™ (van Gelder, 2007), which helps students to create, organize and manage argument maps, one can now assemble argument maps easily and rapidly. This may overcome the limitations of manual technologies and help students to confront most of the difficulties faced when attempting to develop and support logical arguments (Bell, 2004; Clark & Sampson, 2006, 2008; Evagorou & Osborne, 2008; Twardy, 2004; Sandovol, 2003; Suthers, 2003; van Gelder, 2001, 2002, 2003).

To investigate whether argument mapping, with the use of Rationale™ software, encourages, develops and strengthens critical thinking and reasoning skills, an experimental research was designed and implemented in Cyprus’ primary schools. Three sixth grade elementary classes (N=72) participated in the research for a period of three months. Two classes constituted the first and second experimental group respectively and the third class was the control group. A pre-test and a post-test was submitted to all students participated in the research in order to assess critical thinking and reasoning skills. Both tests were designed, developed and validated by the researcher. After the pre-test both teachers of the experimental groups worked on reasoning activities. The first experimental group worked in groups of three, with one computer for each group, on reasoning activities using Rationale™ software. The second experimental group worked on the same reasoning activities and in the same way but with pencil and paper, without the use of the software. Activities used for these two groups were developed by the researcher for the purposes of the study. Students in the control group worked on reasoning activities from their Greek language books, without any specific intervention in their learning process.

The pre-test results reveal that most of the students participated in the research (66% below the base) did not acquire basic critical thinking and reasoning skills whereas the results of the post-test show that this number was decreased (47% below the base) mainly due to the performance of the students of the first experimental group, which used the software, since the comparison of pre-test and post-test means scores, shows that there is a statistically important difference only in this group (t=-6.384, p=0.001 for p<0.05).

The research results are rather encouraging and indicate that the use of teaching tools suitably adapted in each age and group of students, like Rationale™ software, through carefully designed activities and systematically, consciously organized and long lasting quality practice from early years of primary school may promote the development and the use of critical thinking and reasoning skills.
C7.2  Empowering students’ independent learning through service learning in a context of Hong Kong primary school
Susanna Chung, Diocesan Boys' School Primary Division, China

Abstract
Children need to be equipped with specific skills in order to participate well in tomorrow's world, such as problem solving and independent learning skills, which are generally considered as the 21st Century Skills. In our daily school practice, how can we integrate those skills into classroom activities to develop our children become independent problem solvers? This study examines the use of service learning as one of the keys to develop children's 21st Century Skills in a primary school in Hong Kong.

There are many definitions of service learning, and according to Learn and Serve America (2012), service learning is a teaching and learning strategy that “integrates meaningful community service with instruction and reflection to enrich the learning experience, teach civic responsibility, and strengthen communities.”

Moreover, in Service Learning Australia (2012) which states that “Academic learning, linked to student-directed community service, enriched by intellectual enquiry and reflection.”

The key components of service learning in my study are –learning experience, student-direction and reflection. Service learning is commonly practiced in high school curriculum in other countries like, the U.S.A. In Hong Kong, service learning is not a compulsory component in the educational curriculum, though the Reform Proposal for the Education System in Hong Kong calls for providing the most favourable environment for teaching and learning. In recent years, it has been implemented in the New Secondary Education in Hong Kong, but only few primary schools include service learning in the curriculum for the whole grade in Hong Kong.

This study focuses on a service learning project within a Hong Kong primary school that involved 150 Grade 6 students who joined a flag selling activity. As a new experience for Hong Kong primary school students, this project involved students in community activities that complimented their classroom studies and provided a real life environment that strengthens students’ social responsibilities. Service learning provides a real life environment that lead to various learning outcomes and reflection beyond the classroom. A pre-task questionnaire was specially designed to collect more information and understand the attitude of the flag buyers. Questionnaires and reflective journals were collected after the service to explore the following research questions: 1) What problems do students encounter while doing community service practice? 2) To what extent does Service learning empower students’ independent learning skills?

Students’ reflections are mainly positive about their flag selling experience. They are able to integrate their classroom learning into experiential learning and develop a sense of civic responsibility. Research shows the reflection outcomes for students generally fall into three categories: Knowledge and skills, self development and community involvement. Data analysis also suggests that students’ service learning experiences impact greatly on their independent learning in terms of opportunities of expressing their opinions, decision-making, social communication and sense of responsibility. Though students encounter various problems in the community service practice, such as too shy to approach others or being ignored, they have enhanced their problem solving skills in the real life learning
Not only does service learning allow students to apply their prior knowledge to solve real-life problems, it also facilitates their active participation within the community and helps them to become actively contributing citizens and community members through the service they perform. This study also shed light on how to implement service learning in the context of primary schools in Hong Kong.

C7.3 **Metacognition and planning of a long-term scientific inquiry: The case of two ninth graders**

Billie Eilam, University of Haifa, Israel

**Abstract**

Aim. To investigate the effect of cues regarding processes involved in the teaching of independent inquiry on students’ use of metacognitive knowledge, while planning, monitoring and evaluating their inquiries.

Conceptual Framework. Open, long-term self-regulated inquiry that is supported by tools for promoting students’ learning was found to be a suitable teaching mode and a context for gaining experience in metacognitive knowledge (MK) use (Author, 2012; Author & X, 2003; Ngeow & Kong, 2001). Such tools were designed in this study to elicit diverse types of cues that promote students’ metacognitive awareness, hence enable students to orchestrate and manage the employment of knowledge and skills to successfully accomplish task goals under various conditions (Flavell, 1979; Kapa, 2007; Kuhl & Goschke, 1994; Schraw & Moshman, 1995). A long-term complex inquiry requires planning, which is an intentional process and a metacognitive skill, aiming to ensure successful task performance and goals achievement thus - enhancing academic gains (Hacker, 1998; Prins, 2002; Schraw, 1998; Veenman, Elshout & Meijer, 1997). Planning entails the employment of MK for transforming learning intentions into action plans (Gollwitzer, 1996), decomposing a high-level abstract distant goal into more concrete attainable ones, selecting activities, their enactment sequence and allocating and managing resources (e.g., time, space, tools) for activities execution. MK is also required for monitoring plan execution and accordingly evaluating and revising them to bring a change in behavior; hence, planning acts as a self-improvement tool (Gauvain & Rogoff, 1989; Hacker, 1998; Prins, 2002; Wilson & Keil, 1999). Monitoring relies on learners’ ability to perceive internal and/or external cognitive, affective and/or situational cues (specific current constraints and affordances that require adjustments) (Carver & Scheier, 1990) that are utilized for assessing progress relative to goals. A perceived discrepancy between plans and executed plans may generate such cues (Butler & Winne, 1995). MK use was examined in the present study.

Method. Participants: Two nine-graders, a high (Tim) and a low (Ben) achievers, attending a middle-class urban junior-high school in Israel, who performed the long-term yearly science inquiry.

Instruments: A Daily Planning Self Report Instrument (DPSRI) was designed and applied as an on-line prompt for initiating internal cues by explicating discrepancies between students’ plans and executed plans as related to goals and circumstances and by students’ rationalizing about the identified gaps. These reports also enabled externalization and documentation of students’ behaviors in real time. Students could examine their prior plans while designing a new one.
Data analysis. Students’ use of MK while planning, monitoring and evaluating their long-term inquiries was examined by comparing categories (e.g., type of activity, time allocation, sequence) of their DPSRI along the year, applying a qualitative fine-grain analysis. Three categories are discussed here.

Results and conclusions. Considerable differences were found between the high and the low-achieving students, regarding all three categories, Tim showing much greater use of metacognition as was evidenced in:

a) Setting goals based on the extent of his understanding the task (due to past experience and textbook explanations) and on considerations of inquiry future needs. Goals setting improved along the year becoming more realistic, focused and related to task structure, which promoted attainment by the efficient goal translation into planned activities.

b) Selecting and sequencing activities based on metacognitive awareness of past experiences, present and future inquiry needs, and required domain knowledge. Ability to operationalize general activities into accurately defined specific activities of limited scope that were therefore easily applicable in the specific circumstances and to customized activities and their sequence to accommodate needs. However, even Tim exhibited a deficient awareness of his own available knowledge and skills, which impeded his planning and monitoring.

c) Being aware of cues regarding time constraints (perceiving gaps between estimated and actual required time) and general inquiry state, as well as past experiences and changing time allocation to various activities along the year.

The fine-grain data analysis of students’ on-line reports revealed that Tim’s planning was aided by the DPSRI much more than Ben’s, and difficulties which were much more salient in Ben’s case, but impeded Tim’s MK use as well.

Conclusions. Planning requires metacognitive awareness of one’s own cognitive resources (knowledge and skills), of the contexts and specific circumstances, and the task to be performed, which constitutes currently a most desirable instructional goal. Such awareness was found to be deficient in both high- and low-achievers, although much more in the latter. It is suggested that teachers should engage students in long-term planning activities, monitoring and evaluating of their plans for improving their ability to learn independently.

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<td>C8.1 Exploring a university teacher’s assessment conceptions and assessment practices in biosciences Mapula Matimolane, Moyra Keane and Elizabeth Brenner, University of the Witwatersrand, South Africa</td>
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Abstract

Higher education studies on teachers’ conceptions have intensely focused on conceptions of teaching (Kember & Kwan, 2000; Trigwell & Prosser, 1996) in general, with less attention directed to exploring conceptions of assessment. Even though a number of studies have explored conceptions of assessment in pre-university contexts (e.g. Samuelowicz & Bain, 2002; Watkins, Dahlin, & Ekholm, 2005; Postareff, Virtanen, Katajaviuori, & Lindblom-
few (including studies in South Africa) have focused on conceptions and practices of assessment in higher education. In an Australian study, Samuelowicz and Bain (2002) showed that conceptions of teaching were linked to academics' conceptions of assessment, with teacher-centred instructors viewing the purpose of assessment as the "reproduction of knowledge" or "application of knowledge", while student centred faculty were concerned with "assessing student's ability to integrate, transform and use knowledge purposefully" (p. 190).

The purpose of this research. The focus in this paper is on analysing conceptions and practices of assessment of one university bioscience teacher, whom I shall call Johnny. Johnny's conceptions of assessment, his thinking and decisions about how and what to assess were investigated. I also explored how the teacher’s conceptions of assessment are related to his actual assessment practices. Johnny is an Ecology graduate, who came into university teaching on the basis of his disciplinary research qualifications. He is a second year Ecology lecturer with no formal teaching qualification and five years teaching experience.

Methodology. Multiple sources of data were used to examine Johnny's conceptions of assessment and his assessment practices. Content analysis of the teacher’s course documents such as course outline, test questions, test scripts and research reports provided evidence of his assessment practices. In addition a semi-structured interview was conducted with the teacher to explore his assessment conceptions and their relation to his practices.

Conceptual framework. In analysing and discussing conceptions of assessment I drew on the learning-oriented assessment framework (Carless, 2007). Learning-oriented assessment is a relevant framework and can play a critical for teaching and learning for conceptual development in science related subjects. Learning-oriented assessment includes both formative (assessment for, or as, learning) and summative practices (assessment of learning). The purposes of the two assessment types are to certify achievement; and to support and enable learning respectively (Carless, 2007). Different practices of assessment would generally lead to different outcomes leading to tensions between practices and/or purposes.

Findings. Johnny's personal experiences and beliefs about the nature of the discipline (ecology) seem to be the key source shaping his assessment conceptions and subsequently directing his preferences and assessment practices. Overall, there is alignment among his conceptions and practices of assessment. His assessment practices could be interpreted in terms of different conceptions. The overall analysis from documents and what emerged from the interview data reveals a dichotomy of accountability and learning oriented assessment practices each of which were linked to specific assessment methods. The accountability practices were linked to the use of summative assessment methods (tests and exams with no feedback). The learning oriented practices were linked to the use of research report writing assessment activities (emphasis on feedback).

However, based on Samuelowicz and Bain's (2002) three categories of conceptions about assessment, Johnny seems to have elements in each of them. He views the purpose of assessment as the "reproduction of knowledge" which is aligned to the practice of using tests and exams. He also views assessment as "application of knowledge", and “transformational value of knowledge”. This is in alignment with his practice of using the
Overall, Johnny’s conceptions are mostly intuitive yet sound. The conceptions translated into assessment practices seem to be driven by the need to fulfill several roles of assessment: certification and accountability (summative assessment) and learning (formative assessment and feedback). His inconsistent beliefs/practices are due to conflicting views on the roles of assessment as well as several constraints (e.g. time, university policy, lack of pedagogical knowledge).

Conclusion. This paper highlighted the importance of learning-oriented assessment framework in the characterisation of an individual teacher’s assessment practices and conceptions. That is, this study emphasises the need to view conceptions of assessment beyond the dichotomous approach similar to the student-teacher centred approaches to teaching. Using this approach, I was able to capture in detail the purpose of assessment, sources of the conceptions of assessment and their links to various teacher practices. Finally, the study highlights the challenges teachers face in translating well-developed and sound beliefs about the ways of thinking and practising in a discipline into teaching, learning and assessment practices.

C8.2 Effective teaching of school science as science teachers’ classroom use of language – A transnational study
Samuel Oyoo, University of the Witwatersrand, South Africa

Abstract
While learning school science has variously been referred to as a process of conceptual change, the alternative view of learning science as cultural border crossing is an equally convincing reference to the process. School science as a distinct culture has also been referred to as a distinct language. Questionnaire studies on students’ understandings of everyday words commonly used by teachers in school science classrooms have revealed near to identical kinds of difficulties students encounter with these words. While these difficulties have been irrespective of gender of the science learners and whether the learners use English as the first language or not, one important highlight has been the fact that “everyday English words cease to be mere English words” (Marshall, Gilmour & Lewis 1991, p. 334) when used in the science context. This presentation first presents the plural view/conception of the nature of school science and an overview of the general difficulty of the science classroom instructional language. It then presents a synthesis of findings in two separate investigations (in Kenya and South Africa) of the sources of difficulties students encounter with everyday words when used in the science context. In both countries, the participants consisted of Year 11 and 12 physics/physical science students (N = 715) and their respective teachers (N = 20). Data were collected by use of a questionnaire/word test, followed by focus group and in-depth interviews with both categories of participants. One major revelation is that the approach taken by science teachers to use of instructional language during teaching is a key factor of the students’ ability to tell the meanings of everyday words when used in the science context, hence how effectively students learn school science. Based on this revelation, other findings in the study and relevant research literature including the argued plural nature of school science, an attempt is made to describe an appropriate approach (as a general teaching methodology) to use of instructional language for effective teaching of physical sciences/physics.
### C9.1 How does controlling teaching behaviour relate to pupils’ motivation in physical education?

Jotie De Meyer, University College Ghent, Belgium; Isabel Tallir, Bart Soenens, Maarten Vansteenkiste and Leen Haerens, Ghent University, Belgium

**Abstract**

Self-determination Theory (SDT; Deci & Ryan, 2000) theoretically conceptualizes how the social context can actively thwart people’s needs so that less optimal forms of motivation are more likely to emerge. The purpose of the present study was to investigate need-thwarting dynamics in relation to pupils’ motivation in the context of physical education (PE).

A sample of 702 pupils (out of 56 different classes) and their PE teachers participated in the study. Pupils’ perceptions of need thwarting were measured by the Psychologically Controlling Teaching (PCT) (Soenens et al., 2012) added by two items from the Teacher as Social Context Questionnaire (TASC; Belmont et al., 1988). The Behavioral Regulations in Physical Education Questionnaire (BRPEQ) (Aelterman et al., 2012) was employed to measure pupils’ motivation. Video-images of the 56 PE-lessons were coded every five minutes for 16 teaching behaviors tapping into different dimensions of need-thwarting behaviors. Observed controlled teaching behavior was not related to autonomous motivation, while a positive relationship with controlled motivation (p<0.05) was found. Mediation analyses revealed that the relationships between observed controlled teaching behavior and controlled motivation (69.4% mediated, p<0.05) was significantly mediated by perceived need thwarting.

In conclusion, when teachers engage in controlled behaviors, pupils also notice this, which results in less optimal forms of motivation for PE. Since these form of motivations are known to induce negative outcomes such as less engagement, it is recommended for teachers to avoid controlled behavior.

### C9.2 Determinants of secondary school students’ motivation towards physical education: Individual versus class-level factors

Lise Speleers, University College Ghent, Belgium; Hilde Van Keer, Ghent University, Belgium; Jotie De Meyer, University College Ghent, Belgium and Leen Haerens, Ghent University, Belgium

**Abstract**

Research indicates that young people who are more autonomously motivated for physical education (PE) classes, display a higher level of concentration, more commitment and better attitudes towards PE (Cox et al., 2008; Ntoumanis, 2001). This results in higher levels of physical activity both inside and outside physical education lessons and in better learning outcomes (Aelterman et al., 2012; Cox et al., 2008; Haerens et al., 2010; Ntoumanis et al. 2001).

As autonomous motivation leads to positive outcomes, we wish to develop knowledge about individual and contextual correlates of (a-)motivation for PE, with particular attention to the role of the teacher. Based on the Self-Determination Theory (Deci & Ryan, 2000), a
distinction between two qualitatively different types of motivation is made: autonomous motivation and controlled motivation. Autonomous motivation is the most optimal type of motivation, because one wishes to contribute out of personal interest, enjoyment or because one can understand the value of engaging in an activity. On the other hand, controlled motivation manifests functioning from external or internal pressure. In addition to these two types of motivation we also distinguish amotivation, defined as a lack of motivation.

The self-determination theory (SDT) underlines that, teachers who support students’ basic psychological needs for autonomy, competence (structure) and relatedness enhance students’ autonomous motivation (Deci & Ryan, 2000). Hence the present study investigates whether support of these three needs indeed relates to students motivation, while simultaneously considering other important contextual and individual factors.

Prior research refers to gender distribution within the class (Lyu & Gill, 2011; Olafson, 2002), lesson topic (Bevans et al., 2010; Hassandra, et al., 2003) and the structure of the class environment (Papaioannou et al., 2004). Individual factors like gender, educational track (Koca, 2005), age and socio-economical status, have also been less frequently investigated from a motivational point of view (Vandenberghe et al., 2011).

In this respect, the main aim of this paper is to investigate the relationships between teaching behaviors, contextual factors, individual characteristics and students’ motivation for PE.

Participants of this quantitative research were 2064 Flemish secondary school students (between 12 and 18 years old), from 6 different academic and vocational schools. To define the type of motivation, the students filled in the BRPECQ (Aelterman et al., 2012). Teacher behaviour was measured by the TASCQ (Belmont et al., 1988); student-related (e.g. SES) and contextual factors (e.g. topic) were also quantitative measured through questionnaires.

Multilevel regression analyses will be used to analyze the data, in the present abstract preliminary analyses are presented.

The importance of considering both student-related and contextual differences when explaining variance in motivation for PE is clearly exposed in the first analyses. Linear regression analyses confirm that teaching behavior is important to consider when explaining students’ motivation. Students who experience more autonomy support (p < .001; β = .175), structure (p < .01, β = .129) and relatedness support (p < .01, β = .152), report significantly more autonomous motivation. In addition, students who experience less autonomy support (p < .05, β = -.099) and relatedness support (p < .001, β = -.195) report a higher level of amotivation.

Contextual factors such as transport to the sports centre (p < .001; β=.179), also relate to students’ amotivation, with students reporting to be more amotivated if they had to make large transports to the sports centre Next, independent-Samples T-tests confirm that students from academic tracks report significantly more autonomous motivation (p < .05, T = 2.37, df = 1755.78), and significantly less controlled motivation (p < .001, T = -3.69, df = 1880.82), and amotivation (p < .001, T = -5.44, df = 1865.25) than students from vocational schools.

As for the individual factors students’ gender also plays an important role. Boys report significantly more autonomous (p < .001, T = 11.26, df = 1836.78) and controlled motivation
Students who had bad marks for PE reported to be more amotivated ($p < .001; \beta = -0.111$).
Students with a lower SES report significantly more controlled motivation ($p < .01, T = 2.75, df = 810.84$) and amotivation ($p<.01, T = 2.69, df = 837.59$) than students with a higher SES.
So far, we may conclude that teacher behavior, SES, gender, and educational track are related to students’ motivation. The results emphasize the importance of a more in-depth analysis by means of a multilevel approach taking into account the teachers’ way of interacting with the students in a specific school and teaching context, and accounting for students individual characteristics.

C9.3 **Level and sources of self-efficacy of physical education teachers in Sao Paulo public schools, Brazil**  
Roberto Iaochite, State University of Sao Paulo, Brazil

**Abstract**
Studies on self-efficacy beliefs grounded on the Social Cognitive Theory (Bandura, 1986, 1997) have revealed significant contributions for the areas of education, psychology, medicine, physical education, business administration, among others. In the educational literature, these studies have been focusing on the teacher self-efficacy beliefs within different contexts, subjects and teaching levels. Teacher self-efficacy is related to the judgment the teacher makes about his or her own capabilities to achieve, within the domain being taught, determined learning outcomes and students’ engagement. This judgment is constituted by the cognitive interpretation of information derived from four sources: mastery experiences, vicarious experiences, verbal (social) persuasion and physiological and affective states. The present investigation is situated in the area of teaching in scholar physical education context, majority in Junior High School, and had as its mean objectives: a) to know some characteristics related to the context and teaching activity; b) to identify and analyze the level of self-efficacy for teaching and the sources of this belief; c) correlate self-efficacy for teaching and the sources of origin with some variables of the context and the teaching activity. Participated in this study, 263 teachers (10.6 years of experience in teaching, 84% working in state-run schools with average working time of 32 hours/week). Data was collectively gathered, in one phase, with the application of two Likert-type scales of six points named as “Physical Education Teacher Self-Efficacy Scale” ($\alpha = .94$) and "Teacher Self-Efficacy Scale Sources" ($\alpha = .81$), and a questionnaire of characterization of the participants, teaching activity and teaching context. Results showed that the teachers present high self-efficacy belief ($M=4.74$) for teaching. Mastery experiences ($M= 4.85$) and social persuasion ($M=4.71$) were considered the sources with the highest impact to constitute this belief. Within the investigated variables, the satisfaction as a teacher ($r=0.402; p<0.01$), professional pre-service experiences ($r=0.367; p<0.01$), facilities ($r=0.228; p<0.01$), support from principal ($r=0.257; p<0.01$), freedom for expressing ideas ($r=0.130; p<0.05$) and peer support ($r=0.151; p<0.05$) were positively associated to self-efficacy. As to the sources, satisfaction as a teacher was positively correlated to mastery experiences ($r=0.301; p<0.01$) and social persuasion ($r=0.161; p<0.01$). The results provide important directions for reflection about the processes of education and work of the physical education teachers, in the sense of trying...
to comprehend the dynamic and complex relation among self-efficacy beliefs, their sources of information, and the context where the pedagogical practice is developed.

Session number: C10  Location: Room 3B  Time: 13.00 – 14.30

Paper presentations  Chair: Antonia Aelterman

**Learning to teach through practice**

**C10.1 Paired practicum: Teaching and learning together**

Raylene Galvin, University of Otago, New Zealand

**Abstract**

First-year student teachers from a large New Zealand university are placed in pairs for their first practicum (school experience). Practicum is fundamental to a student’s initial teacher education program because it provides an opportunity to work alongside an experienced (associate) teacher. During practicum student teachers are mentored into the culture of teaching and learning.

The New Zealand academic year is from February to November. The first two week practicum is in May with a three week placement in November. Although first-year student teachers are briefed (about teaching and professional documentation requirements), visiting university lecturers are not always able to adequately prepare them to work with a practicum partner. First-year student teachers’ experiences at school and their professional relationship with a practicum partner are often overlooked and left to chance. A recent university policy change means the visiting lecturer is no longer required to complete a formal observation of each first-year student teacher during their May practicum. Therefore, there is even more need for practicum partners to be encouraged to provide each other with on-going support and guidance as they orientate to their practicum experience.

This research aims to explore practicum partners’ experiences of shared planning and teaching responsibilities as well as giving or receiving feedback. A qualitative design will be used to explore the research question, “Does encouraging first-year student teachers to support each other to plan, teach and reflect, enhance their practicum experience?” The research timeline is April to June 2013.

Vygotsky’s (1978) social constructivist learning theory, with emphasis on discourse, is the theoretical framework that underpins this research. Learners’ varied experiences and previous knowledge influence discussion as understanding develops from listening to others who may have different viewpoints (Vygotsky, 1978). As each learner interacts with new knowledge he/she internalises the information and works towards achieving individual learning goals (Vygotsky, 1978). First-year student teachers will hopefully learn from their associate teacher as well as with, and from, discussion with their practicum partner.

Student teachers are randomly partnered and placed at primary schools for each practicum. Age and gender is not a factor in any partnerships. Three schools (from different settings) will be randomly selected from the pool of schools who offer to host first-year students. After notification of their school and practicum partner, first-year student teachers will be asked if they would like to participate in this research project.

Prior to the May practicum, participants will meet with the researcher, their practicum partner and school group. Suggestions for sharing teaching ideas will be discussed and the benefits of cooperative teaching will be highlighted. The procedure for cooperative teaching will be based on Smith’s (2002) notion of tandem teaching. Together, participants will be encouraged to plan, teach, and reflect on their lessons. For the reflection/feedback
process, students will be given a notebook to record advice and guidance for their practicum partner. Data will be collected from a focus group interview at school and semi-structured individual interviews held when student teachers return to campus. These interviews will provide participants with an opportunity to discuss events as they experienced them and to also introduce, if they choose, other related topics (Glesne, 2006; Paton, 2002). Open-ended interview questions allow participants to discuss topics more freely because they will hopefully understand that a specific answer is not expected; rather that the researcher is endeavouring to further understand their individual experiences (Glesne, 2006; Paton, 2002). This flexible approach will also contribute to a qualitative inquiry because participants’ ideas may impact directly on the research topic and the direction in which the research develops (Paton, 2002). As the cohort will include mixed gender practicum partnerships this will likely add depth to data collected. It is anticipated that following feedback from their practicum partner, participants will more easily identify the steps they may need to take to further support children’s learning and to achieve their own teaching goals. In line with Wilkins, Shin and Ainsworth (2009), student teachers will likely find it easier to receive advice about their teaching from their practicum partner rather than their more experienced associate teacher. It is predicted that enhancing first-year student teachers’ overall practicum experience will encourage more understanding of their professional development needs when they enter their November practicum. This research also aims to improve the transition of first-year student teachers as they study and work towards joining the teaching profession.

C10.2  **Perceptions of teachers on inclusive education**
Elisabeth De Schauwer and Inge Van de Putte, Ghent University, Belgium

**Abstract**
Being a teacher in the 21st century is a demanding job. The teacher is always placed for new challenges and demands. One of the major challenges is giving an answer on our society that is becoming more diverse. This results in classrooms where children of the same age but with different interests, abilities and differences sit together in one classroom. With the ratification of the VN-resolution for disabled people (2009) Belgium needs to develop a more inclusive educational system. This evolution has consequences for the whole schoolsystem, teacher in the classroom and support. There is a lot of research about the attitudes of teachers towards inclusion (De Boer et al., 2009), but the voice of teachers with experience in an inclusive classroom is not heard. Teachers with experiences can give us knowledge about the comprehensive tasks regarding teaching to children with special needs. This information would be valuable in the training and support of teachers. The paper presents the findings of a qualitative research where 17 teachers from kindergarten, primary and secondary schools were participating. All teachers had experiences in working with students with disabilities in regular education. In the 17 situations is a strong variation in age, experience, education type, nature of the capacities of the child, support options etc.

The aim of this study was to investigate what we can learn from the experiences of teachers that have already invested in several processes of inclusive education. The data was generated form semi-structured, in-depth interviews. The themes we dealt with in all the interviews : vision on education, the representation of the child with a
disability, involvement of the child in the classroom, impact on teaching, building an individual learning path and team functioning around the child and dealing with support. We asked teachers to focus on one school year and one concrete inclusion situation. All interviews were transcribed completely and played back to the teachers to change again, to articulate, to clarify and/or supplement.

For the analysis the researchers followed an inductive and conceptual way of working such as Charmaz (2006) method for reoccurring themes, common patterns and exceptions. Six common aspects in the stories of the teachers came clear and were worked out deeper: 1) the selection process of the teacher to meet the challenge of inclusive education 2) teachers and uncertainties 3) participation of the child within the classroom, 4) influence of inclusion on the classroom climate and social relationships 5) communication and cooperation with the team around the child and finally 6) the quest and the use of support in the class.

These results of this research provide valuable insight on how teachers committed to the struggle for inclusive education. Teachers fall back on their basic skills as a teacher (O’Donoghue & Chalmers, 2000). By working with the child they learn a lot more about the abilities of children, while they were previously mainly focus on the problems of children. (Avramidis, Bayliss & Burden, 2000). The initial uncertainty reduces gradually by working with the child. So it’s important that teachers get the opportunity to ‘learn on the job’. By trial and error, knowing what works and reflect on that process. Their fore they become more conscious about what they are doing in class.

Teachers experience a need for information and coaching. No additional training but support. Because inclusion continues to look for balance, between extra care to one individual and reaching the standard curriculum with the rest of the group. This means that a teacher need support in differentiation and organize a flexible classroom management. Teachers have to find a balance between addressing the social skills and cognitive aspects in their teaching (Giangreco, 1997). The teacher needs support in the search how they can teach something to a child in the classroom and stimulated and support social interactions. Our study shows that teachers have support needs. Teachers needs opportunities to work with the child with a disability and needs moments to reflect on the process with other people. This findings are important for the development of inclusive education and practice.

C10.3 School education in deprivation of liberty: Reflections and proposals about the curriculum
Willian Lazaretti Conceição and Áurea Maria Guimarães, Universidade Estadual de Campinas, Brazil

Abstract
This research aims to analyze the social scholar practice of adolescents under the condition of liberty deprivation. The research general questions run implications for teaching practice, focusing on the analysis of study in adolescent deprivation of liberty and the relationship with the school curriculum, considering the scenario of lag and dropout, lack of continuing education for teachers, serial curriculum for multigrade classrooms, lack of bond by the adolescent with the school institution, even before coming into conflict with the law, among other situations that may hinder the educational process. Thus, we identify
as the specific research questions: How do teachers and pedagogical coordination work within this context, and how do they analyze the possible referrals which could be taken in proposing a curriculum for arrested teenagers? With the paradigm shift into social and educational care in the State of São Paulo, Southeastern Brazil – specially in the implementation of the institutionalization as social-educational procedure, which consists of a probation sentence, subject to the principles of brevity, exceptionality, and respect to the peculiar condition of the developing person – some researchers have directed studies aiming to identify the reality of youngster as offenders, trying to understand how the relationships in diverse social practices carried out in such context. The measure of institutionalization consists of principles that are complementary, and based on the premise that the educational process in the fulfillment of the measure has to consider the brevity as a prerequisite. The teenager should not remain prolonged in a detention center, given that the environment is constituted as dangerous. Its practices and safety procedures confirm an "imminent danger" to the professionals and also for the adolescents. They experience a conflictual process of trying to protect themselves against the power relations that generate tension, because the relationship between youngsters is affected by the assumption that the institution is designed for dangerous individuals. Authors who contribute theoretically and methodologically to the field of curriculum have been considered in this investigation. We think that the curriculum covers the school experiences that unfold around knowledge, in the midst of social relationships, and that contributes to the construction of our students’ identities. Thus, curriculum joins the set of educational efforts and intentions. Discussion about knowledge, truth, power, and identity stresses invariably curricular issues. Therefore, the aim was to investigate the teaching strategies used by teachers in a Centre designed for social and educational services towards the adolescents’ needs in deprivation of liberty. It focuses on analyzing the interfaces that make up the curriculum to pursue systematic aspects evidenced by teachers, creating a proposal for a didactic organization that guides the development of pedagogical planning for similar public Centers. This is a qualitative study, using as research technique observation and focus groups with teachers of nine Service Centers of detention, following a fixed syllabus but also flexible. We understand the curriculum as a space for discussions about the procedures and the social relationships that compose the scenario in which knowledge is taught and learned about the changes we want to pupils’ lives, about the values and identities we want to build. Therefore, when analyzing the different realities of teachers and teenagers living in detention centers that were observed, we conclude that: a) the students do not mean the school as a relevant social practice due to family influence and/or lack of respect of teachers and school principals; b) teachers do not use the state curriculum as the only possibility of teaching; c) teachers adapt the curriculum to local reality and consider the students’ knowledge; d) the pedagogical coordination in the condition of liberty deprivation takes actions that differ from other schools; and e) it is possible to organize a specific curriculum to detention centers designed for adolescents in conflict with the law.
Session number: C11  Location: Room 3C  Time: 13.00 – 14.30

Paper presentations

Teachers and the multicultural society

Chair: Elke Struyf

C11.1  Preparing teachers for multicultural classrooms

Jessica Premier, Monash University, Australia

Abstract

In Melbourne, Australia, multicultural classrooms have been prevalent since the post-war migration period of the 1950s. In recent years, Melbourne has seen an influx of refugee and migrant students from war-torn regions, such as Afghanistan and Africa. These students are acquiring English as an Additional Language (EAL), have often had disrupted or limited schooling, and may have experienced significant trauma (Hamilton & Moore, 2004). Catering for such students requires specialised skills and knowledge (Miller, Mitchell & Brown, 2005; Premier & Miller, 2010).

This paper presents the preliminary findings from a current doctoral study taking place in Melbourne. The principal focus of the study is to investigate the extent to which mainstream teachers are prepared to cater for EAL students in the classroom. This presentation will focus on findings relating to the theme of teacher education. The research question for this aspect of the study is:

To what extent does current pre-service teacher education and Professional Development (PD) prepare teachers to meet the needs of EAL students in the mainstream?

This preliminary study involved analysing data gathered from teacher participants who are currently employed as mainstream teachers in Melbourne schools with high numbers of EAL students. It involved a questionnaire which was completed by thirty-two primary teachers and eleven secondary teachers with varying years of teaching experience.

According to the majority of participants, their pre-service teacher education degree did not equip them with adequate skills to address EAL student needs. The data indicates that a wide array of support to assist mainstream teachers with catering for EAL students is available to the majority of teachers, but participant perspectives reveal that the most useful are Professional Development (PD) sessions; having a teacher aide in the classroom; and obtaining advice from colleagues. However, some participants reported that no PD or support in EAL teaching is available to them, indicating that not all schools have equal support services in EAL education.

This study has the potential to positively impact on the teaching performance of mainstream teachers in Melbourne and other parts of the world. Preliminary results have identified areas of concern in relation to teacher education. It appears that pre-service teacher education and existing teacher PD could be enhanced in the area of EAL in the mainstream. As a result of this study, appropriate measures can be taken to review current practices in teacher education in order to better prepare teachers for multicultural classrooms.

It is hoped that this presentation will raise awareness of this issue in teacher education, as the preliminary data suggests that the area of EAL in the mainstream requires greater attention. Doing so will ensure that excellence in teachers and teacher education is being maintained in our multicultural schools.
C11.2 Ethnic minority teachers, why not? Research into the perceptions of ethnic minority youth regarding the teaching profession
Elke Struyf, University of Antwerp, Belgium and Karin Goosen, ELANT, Belgium

Abstract
The teaching population in Flemish schools does not reflect today’s multicultural society. Ethnic minorities are strongly under-represented in the teaching profession in Flanders (Minderhedenforum, 2007). However, there is a need for ethnic-minority teachers. Research in other countries has shown that teachers of ethnic minority function as role models for students of ethnic minority, having a positive impact on the performance and well-being of these students in school (see e.g. Dee, 2001; Milner & Howard, 2004; Milner, 2006). Why are young people of ethnic minority less likely to enter the teaching profession? Although research on motives for choosing the teaching profession has already been published, studies that addressed minority young people as a separate group are scarce.

Using focus group methodology, 51 students (aged 16-18) of Turkish, North African or Arab origin were asked to discuss their motives for choosing to enter (or not to enter) the teaching profession in. They were all following vocational and technical tracks in secondary schools located within the inner-city area.

As driving factors, the aspects mentioned by the minority respondents were the same as those that have been identified in previous research (see e.g. Jarvis & Woodrow, 2002; Kyriacou & Coulthard, 2000; Manuel & Hughes, 2006; Miller & Endo, 2005). Extrinsic driving factors of the profession include the number of holidays, the ease of combining teaching with a family, job security and good retirement arrangements. Intrinsic factors mentioned by the respondents included the bond that can be built with children and students and the satisfaction that teachers experience in the education of children.

The barriers – which are much more numerous in our study – are largely the same as those cited in previous research: the volume of work to be done at home, the poor pay, problems related to order and discipline in the classroom, the lack of respect on the part of students and the fear that their ethnic origin would subject them to discrimination as a teacher. In addition, our respondents explicit mentioned perceiving the profession as being boring and monotonous, and indicated the issue of being not allowed to wear a headscarf in school (applicable only to women).

Comparing the driving factors and barriers, we notice that two elements are mentioned in both categories. First, the respondents differed in their opinions regarding pay. Some considered teaching as a well-paid job, while others felt that teachers do not earn enough (and prefer more prestigious occupations like doctor or lawyer). Opinions also diverged with regard to the content of the job. Few of our respondents considered teaching to involve variation, and most believed that it would be boring to present the same material every year. The diversity of these opinions suggests that the respondents do not have an accurate image of this profession and misconceptions exist.

In contrast to studies conducted in other countries (see Torres et al., 2004; Milner, 2006), which make explicit reference to the low status or prestige of the profession, this factor was not cited in this study as a reason for not choosing the profession. Finally, in contrast to studies by Torres et al. (2004) and by Miller and Endo (2005), the minority respondents
in this study did not mention the fact that teachers can lever social transformation. The need to eliminate the perceived disparity in the educational system has been shown to be a major reason why members of minority groups choose the teaching profession. The results of this study can be used to formulate several policy recommendations. Accessible and accurate information about the teaching profession appears to be highly necessary in order to eliminate misconceptions. We would furthermore encourage national education politics to invest in additional support for teachers, especially during the first years of their careers. For example, a more comprehensive induction programme could empower beginning teachers against problems related to order and discipline, which constituted one of the most frequently mentioned obstacles. This programme could also provide a safety net by minimising the volume of individual work at home and lowering the administrative burden of the teaching profession.

C11.3 **Teacher preparedness and engagement in addressing issues of multiculturalism in Botswana schools**

Annah Molosiwa, University of Botswana, Botswana

**Abstract**

An understanding and appreciation of the diverse cultural background of learners is paramount to their academic achievement as we seek ways to make education meaningful in the 21st century. The way in which certain ethnic groups have been portrayed in history in relation to their socio-economic status and language has resulted in them being marginalized and regarded inferior for a long time. This has been passed on from generation to generation and perpetuated in the education system such that the society at large has embedded within students [and teachers] many negative stereotypical ideologies about ethnic minorities. The fact that about 80% of Botswana’s population speaks the national language (Setswana) has had an impact on the way issues of ethnicity and culture are handled in schools. Setswana is the only local language taught in school alongside English which is the official language. It is not only language in education policy that is questionable; instructional materials and assessment also disadvantage many learners from ethnic minority groups. Some studies and survey reports have long identified the need to device instructional materials that are suitable for remote area dweller children on the basis that their circumstances of living, of culture, of economic and social possibility are different for them than for most in Botswana. Many policy documents acknowledge that the society of Botswana is multilingual and multicultural (e.g. Republic of Botswana, 2001, 1997, 1994, 1977). The country’s Vision 2016 states that; “No Motswana will be disadvantaged in the education system as a result of a mother tongue that differs from the country’s two official languages” (Republic of Botswana, 1997:5). Vision 2016 is a document that presents a long-term vision for how the country should be, developmentally, after 50 years of independence (1966-2016).

Very little is known about teachers’ perception towards multiculturalism in Botswana yet it is important that their perceptions on this issue be explored and understood as they play a key role in students’ academic performance. The focus of this paper was therefore to investigate the extent to which teachers are engaged and prepared to deal with issues of multiculturalism in their classrooms and in school generally. The study adopted a qualitative approach. Data were gathered through interviews and narratives from serving
teachers in schools located in ethnic minority communities and some in-service teachers who were enrolled for a course on multicultural education that I taught during the academic year 2010/2011. The key research questions that guided the study were: 1. What is your view regarding multicultural education courses you took here at UB during your in-service training? 2. To what extent do the school curricula address issues of multiculturalism? The results revealed that the multicultural nature of the students is neglected in many classrooms due to factors such as inadequate preparation of pre-service teachers, lack of professional development for serving teachers, the nature of the curriculum, assessment, teaching and learning resources, and instructional methods. The findings further revealed that parents were willing to participate in the education of their children but lacked awareness of how they could do this. Only a few teachers reported engaging community members in their lessons and this was done when topics on culture were taught. To meet the needs of the diverse student population in schools, the paper recommends that all teacher education institutions should offer compulsory courses on multicultural education. Such courses should sensitize student teachers that the teaching force requires professionals who reflect critically on their instructional beliefs, are committed and have the competence. The importance of culture in education should also be made known and teachers, students and parents be drawn into the debate in order to arrive at a policy that will enjoy national support. A meaningful education system should take into consideration people’s sociocultural and linguistic background in addition to their educational needs.

The study was guided by Cumming’s (1986) theoretical framework of empowering students of diverse backgrounds. This framework puts social, political, economic, and historical trends that form the context of schooling as held by the theory of structural inequality. Cummings identifies areas in which educators’ attitudes play an important part in either empowering or disabling students of diverse backgrounds. According to Cummings, the influence of the societal power structure is mediated by the way educators define their roles in relation to students’ culture and language, community participation, instruction, and assessment. This theory of empowerment was found suitable as it emphasizes the importance of considering the social and multicultural needs of students in day to day delivery of lessons.

### C12.1 Developing teachers’ knowledge base through academic English support in initial teacher preparation
Donglan Zhang and Lawrence Jun Zhang, University of Auckland, New Zealand

**Abstract**

Teacher knowledge is essential to success in teaching. Yet, terms used for expressing it are multiple. A quick review of the literature shows that pedagogical knowledge, content knowledge, pedagogical content knowledge, practical knowledge, personal practical knowledge, knowledge about language, theoretical beliefs, and knowledge base for teaching are commonly used by scholars (see Borg, 2006, pp. 36-49). No matter how the
connotations of these terms differ in shades of meanings intended by these respective scholars, we think that the centrality in language teacher education or teacher education in general is the teachers’ content knowledge and knowledge about the language. Given the importance of language as part of the knowledge base in teaching (Freeman & Johnson, 1998), we report on a university-wide initiative at The University of Auckland that focuses on enhancing teacher candidates’ academic English for effective teaching upon their graduation from the teacher education programmes. Using appointment logs for academic English consultations as the main data source, we will show how teacher candidates’ immediate needs and future expectations change when they are gradually inducted into the teacher education programmes. We will analyse how their feelings, beliefs and thinking are shaped by their increasingly succinct understanding of teaching as a profession, which carries not only professional but also social responsibilities. We will conclude the presentation with a discussion on the challenges facing such an academic-support initiative and its potential implications.

C12.2 Developing pedagogical content knowledge among business and economics teachers – Measuring influences on professionalization
Christiane Kuhn, Johannes Gutenberg University Mainz, Germany

Abstract
We currently are witnessing renewed enthusiasm for output-oriented control of teacher education. This is getting obvious when looking at the competence-oriented teacher standards of the various phases of professionalization (Beck 2006). The current state of research shows that the assessment of teachers’ competencies has not developed alongside this enthusiasm (Kuhn & Zlatkin-Troitschanskaia 2011). Although theoretical models of professional competence among future teachers are more and more consolidating, valid and reliable measurement instruments are still needed. First empirical foundations exist especially for teachers of STEM subjects (e.g. Blömeke, Felbrich, Müller, Kaiser & Lehmann 2008; Rohaan, Taconis & Jochems 2009). The quality of the measurement instruments is of crucial importance as it largely determines the quality of the consecutive analyses and results, as well as their implementation in education policy (Kuhn & Zlatkin-Troitschanskaia 2011).

The research project – funded by the German Federal Ministry of Education and Research – is focused on modeling and measuring pedagogical content knowledge of business and economics (B&E) with the help of a test instrument developed and validated as part of the project. This paper explores the various influences on pedagogical content knowledge during teacher professionalization (university studies, teacher training, and professional career).

Teachers’ professional competence generally is described as a combination of motivational orientation and cognitive components (Weinert 2001). The research project concentrates, in particular, on pedagogical content knowledge that is highly important for the outcomes of students’ learning (Grossman, Wilson & Shulman 1989). Based upon first approaches to domain-specific teacher knowledge (Shulman 1986, 1987; Bromme 1995) and specific features in B&E education, a comprehensive theoretical model was developed that describes the structure and level of pedagogical content knowledge in B&E education. Proceeding from this model, a paper-pencil test consisting of eight closed and nine open
situation-based tasks was developed and validated. On average, the test takes 45 minutes to complete. It also includes questions on potential personal and structural control factors such as socio-biographic characteristics or the number and kind of didactics courses and practical experience.

After pre-test and qualitative preliminary surveys, the test was implemented in 2011 for a differentiated assessment of pedagogical content knowledge. The sample group consisted of beginners and advanced students of B&E education (N=176), B&E trainee teachers (N=109) and B&E teachers (N=53). Considering different groups (quasi-longitudinal) allows first conclusions on the development of pedagogical content knowledge as well as on the instrument’s validity. This is based on the assumption that pedagogical content knowledge increases during the process of professionalization. In addition, the following contrast groups were surveyed: students of B&E (without any teaching background) and future teachers of other subjects (N=142). Less pedagogical content knowledge was expected in this case.

As expected, comparative analyses showed that the groups differed with regard to their pedagogical content knowledge of B&E. Additionally first suppositions could be made on how individual preconditions and teacher education institutions influence the development of pedagogical content knowledge and, thus, contribute to professionalization. With the help of this and other analyses, major evidence for the test’s validity could be found. These findings are to be presented during the talk and will be discussed with regard to their implications for teachers’ professionalization. The talk will include empirical evidence for the current primarily political discussion. Regarding the implications for educational practice, a better understanding of pedagogical content knowledge may help to provide tailor-made learning opportunities in B&E teacher education.

C12.3 The learning of discipline content by teachers is a prerequisite but is simply not enough: A focus on the reasoning skills of teachers
Paul Hobden, University of KwaZulu-Natal, South Africa

Abstract

During the last decade there have been many reports arguing for a change within current educational systems to keep pace with the changes in society and the need to focus on 21st century skills (Silva, 2009). Central to most of these is the argument that students must gain higher thinking abilities to effectively function in our complex science- and technology-based society. Lederman and Ness (2000), write, “Perhaps the most highly cherished emphases of the reforms in mathematics and science education are higher level thinking skills.” Given this long-standing and widespread recognition of the value of critical thinking, there are surprisingly few attempts within teacher education programmes to try and measure these constructs or to explicitly teach them. For example in our local context, an exploratory study using the Cornell Critical thinking Test with prospective teachers indicated their lack of critical thinking skills (Lombard & Grosser, 2004) and their suggestion that ‘extensive research be done to establish the critical thinking abilities of South African educators and learners’ (p. 215).

Added to this importance of critical thinking as an outcome of education, is our goal within teacher education to produce self-regulated learners (Zimmerman, 2008) i.e. teachers who are in control of their own learning and would be able to model and teach their students
how to be self-regulated learners. It is generally agreed that to understand self-regulated learning, three interacting and interdependent processes must be considered. These are cognition, metacognition, and motivation. Central to the cognitive and metacognitive processes is the need to think critically. According to Bransford, Brown, and Cocking (1999) complex thinking and analytical skills are an integral part of learning and skills and content are best learned together. Consequently, critical thinking is central to education, both as a product and as part of the learning process. As such it should be a major focus of any teacher education programme.

The author is responsible for teaching a number of teacher education modules to postgraduate teachers. As a consequence of reading many poorly constructed responses to questions and listening to many incoherent explanations, the question arose as to why these teachers were unable to think critically when they had many years of post-school education and had passed many university modules. Could they be achieving passing grades in university modules, without the need for thinking skills. This led to a study being initiated in which the main research questions were: To what degree can preservice and inservice teachers think critically? Is there a relationship between their ability to think critically and their achievement in university examinations?

While there are according to Case (2002) a plethora of so-called thinking skills, the focus in this study was on two main constructs associated with critical thinking: firstly, the ability to understand argument e.g. making sense of claims, assumptions and explanations (Yeh, 2002) and; second formal scientific reasoning e.g. quantitative reasoning, induction, deduction etc. (Lawson, 1985). A short test consisting of 12 multiple choice test questions, each of which required respondents to choose an answer and then explain why their answer was correct, was constructed. This test has been piloted and then administered to over 500 students engaged with science education courses in teacher education from first year pre-service level to postgraduate in-service teachers at the masters level.

A number of findings from analysis of the data will be presented at the conference. For example, i) there is very little difference between different groups of teachers’ overall scores e.g. males or females, ii) student teachers ability to reason changes only marginally as they progress through their degree. iii) Young inexperienced teachers are stronger at argumentation than more experienced teachers but older teachers have better scientific reasoning skills. iv) There is not a significant correlation between the pre-service teachers’ or inset teachers’ reasoning ability and their achievement in course modules. Reasons for these differences between some groups, in some cases hypothesised to be due to historical factors such as apartheid education system, will be discussed. It is also hypothesized that the tests and examinations written for teacher education modules, do not test for critical thinking skills but rather focus more on reproductive skills. These and other results have significant implications for teacher development programmes if we are to produce teachers who are themselves self-regulating learners with ability to teach future generations the thinking skills we all value.
C13.1 **Beginning teacher induction: A sound investment or a missed opportunity for teacher learning?**
Ruth Kane, University of Ottawa, Canada

**Abstract**
Today the quality of teachers is held to be increasingly important in determining student outcomes (e.g. Alton-Lee, 2003; Hattie, 2002, 2009, 2012), yet there continue to be doubts about whether teacher education programs graduate teachers ready to meet this challenge. In some jurisdictions, other agencies (Ministries of Education, school districts, and private providers), are claiming the space that has traditionally been the responsibility of universities through the introduction of comprehensive induction and mentoring programs for beginning teachers. Induction and mentoring programs have become favoured policy initiatives in recent decades yet there is limited evidence of the degree to which current policy investment in induction programs adds value in terms of teacher professional learning, teacher quality and student learning (Jensen, et al. 2012).

Utilizing a framework provided by the New Zealand Teacher Professional Learning and Development Best Evidence Synthesis (BES) (Timperly, Wilson, Barrar & Fung, 2007) this paper re-examines data from a five year province-wide evaluation of the New Teacher Induction Program (NTIP) in Ontario, Canada. The goal is to examine ways in which the NTIP is experienced by beginning teachers as professional development leading to their own professional learning. This paper is deliberately focused on the professional learning of the beginning teacher as, unlike many other jurisdictions where induction programs are introduced to address beginning teacher attrition, this is not the case in Ontario. Rather, the goal of the NTIP is explicitly focused on enhancing the professional expertise of the beginning teacher and through this to improve student achievement.

In Ontario mandatory induction for beginning teachers is supported by documentation that provides guidelines for teachers, principals and school boards on induction practices. Beginning teachers are to be provided with out-of-class and in-class advice and guidance programs and mentoring by an experienced teacher to assist their movement towards professional competence, which in due course (two times per year) is evaluated by the principal as part of the teacher Performance Appraisal process.

The province-wide Evaluation of the NTIP-In Practice study generated data using web-based questionnaires for new teachers, mentors and principals participating in the NTIP with opportunities within the questionnaires for open ended comments. In the three most recent years of the study 2009/2010 to 2011/12 questionnaires were completed by over 3000 new teachers, 1000 mentors and 1500 principals. Using data from the final three years of this five year evaluation of the NTIP this paper will raise questions as to the efficacy of the investment in induction programs for beginning teachers without a deliberate and systematic focus on the complex array of factors necessary to support teacher learning.
Professional development of newly qualified teachers - Conversational strategies in use in mentoring practices
Merete Føinum, University of Oslo, Norway

Abstract
This study focuses on productive and expansive practices in mentoring of newly qualified teachers. Learning to teach and manage classroom learning is critical for beginner teachers (Ulvik, Smith and Helleve 2009, Smith and Ulvik 2010). Thus, gaining insight in mentoring practices supporting first-year teachers’ understanding and approaches to teaching is important. An activity-theoretical perspective (Engeström 1987, Engeström, Miettinen & Punamäki, 1999, Hauge, Lund & Vestøl, 2007, Daniels, Edwards, Engeström, Gallager & Ludvigsen, 2010) is used to identify conversational strategies used by mentor to unravel and re-conceptualize classroom teaching and learning led by the beginner teacher. By looking at mentoring conversations and talk about situated classroom practices as knowledge creation (Hakkarainen, Palonen, Paavola and Lehtinen 2004, Paavola and Hakkarainen 2005) we are asking: What conversational strategies are productive means in expansive mentoring conversations?

It is not uncommon to argue that teachers struggle to talk in intelligible ways about teaching (Jones 2010, Horn and Little 2010). The problems related to voicing know-how about teaching is often explained as a difficulty of making tacit knowledge explicit (Eraut 2000, Horn and Little 2010). Horn and Little (2010) underline the importance of examining the ways teachers’ structure work-related talk in professional meetings. They examined how professional conversations varied in terms of conversational patterns and routines. They found that the way teachers combined moves of normalizing, specifying, revising and generalizing about teaching dilemmas would afford or restrain opportunities for assessing, conceptualizing and learning from problems of practice. Horn and Little emphasize the movement back and forth between specifying and generalizing as particularly important in conceptualizing and learning about teaching problems. Our study adds to the knowledge base on teachers’ professional conversations by investigating strategies employed when a more experienced teacher, a mentor, works with a protégé to externalize (Hakkarainen et al. 2004) situated knowledge about teaching and enable expansive learning.

Experts from one mentoring conversation explicitly focusing on teaching were selected to illustrate mentors’ work to resolve imbalances experienced by beginner teachers when teaching. The conversation is part of a larger body of observations gathered over a period one school year, totalling 60 mentor conversations by 4 mentors.

A first-year teacher presents his struggle to teach and manage the whole class when one particular student acts in a very demanding way. The mentor invites to a discussion of the balance between leading the whole class versus teaching the one individual student, leadership for learning through focusing on subject knowledge, planning for differentiated learning through task compositions, and the potential for expansive learning for all by careful planning of the learning task. The analyses show that expansive conversations took place when the mentor asked many different types of ‘authentic’ (Dysthe 2005) questions, i.e. questions closely linked to the situated context and experiences.

Expansive conversational strategies applied was 1) Pre-planned questions designed by mentor to approach both successes and challenges experienced by the first-year teacher.
This led to a positive entrance and strategically moved the conversation in direction of teaching challenges. 2) Many in-the-spare-of-the-moment produced questions were applied by mentor. This led to sequences dominated by chains of questions asked by mentor and answered by protégé bringing out and externalizing situated bits of knowledge. The most productive questions were those designed to elaborate on didactic, subject specific and pedagogical aspects. 3) A lot of normalizing statements of a supportive character was applied by mentor as if to encourage further elaboration of the challenge in the externalization phase. 4) Sequences of specification and revision of the teaching challenge took place until the mentor and first-year teacher had reached a satisfactory and shared understanding of the object. 5) Some sequences, however, were less open and took place when a shared understanding of the object was obtained. Mentor was found to hold more or less an advice-speech neatly designed to cater to the needs of the beginner teacher. Combination (Hakkarainen et al 2004) took place when the mentor moved between specification and generalization aiding the first-year teachers’ ability to tie the situated teaching dilemma to general principles of teaching. By perceiving the processes as externalization and combination we found that when led by a mentor these processes triggered and enabled the beginner teacher to resolve the teaching challenge.

Conclusion: This study reveals not only conversational patterns of normalizing, revising, specifying and generalizing also found to exist by Horn and Little (2010). It also contributes with more specific knowledge about conversational strategies employed by mentors’ to externalize otherwise situated knowledge about teaching to enable conversational work on teaching as a shared object.

C13.3 Japanese professional development of beginning teachers in the context of Shokuin Shitsu
Ruth Ahn, California State Polytechnic University, United States

Abstract
Among various in-service teacher professional development models that exist today, Japanese lesson study has received much attention as a tool to improve teaching and learning (Bjork & Tsuneyoshi, 2005; Lewis, Perry & Murata, 2006; Sakar Arani & Matoba, 2006). However, in order to fully understand the Japanese professional development model such as lesson study, it is imperative to understand shokuin shitsu (teachers’ room) where all teachers work together as a collective unit. Shokuin shitsu is a large teachers’ room filled with desks and chairs grouped together according to grade levels, with a grade-level leader’s desk stationed in the center of each group. Japanese teachers start the day in the teachers’ room around 8:00 A.M. with a brief morning meeting that includes the entire teaching staff, including administrators, and end the day in the same room around 5:00 P.M. after all classes, cleaning time, and student club activities finish. It is rare that teachers leave school at that time, as most of them stay until 6:00 or 7:00 P.M. and some even stay until 9:00 P.M. in the teachers’ room to work on next day’s preparation.

Gump (2002) calls shokuin shitsu the “heart” of Japanese public junior high schools where various, day-to-day events revolve around it and relationships among teachers and even students develop. Without shokuin shitsu, as many Japanese teachers voiced in this study,
they cannot teach or function. While there is general understanding that shokuin shitsu has played a central role in nurturing teachers, especially beginning teachers, very little empirical research has been conducted in this area due to its highly restricted environment, with access only being granted to insiders (i.e., teaching staff). Therefore, this qualitative study is a first of its kind in its attempt to examine the roles and functions of shokuin shitsu in a Japanese junior high school, as it relates to beginning teacher development.

In this study, beginning teachers are defined as those that have taught for less than five years. In the initial data collection, six such teachers across various subjects were interviewed for 30 minutes and observed for a week. In addition, two veteran teachers who have taught over 30 years and two administrators -- the principal and vice principal -- were interviewed and observed. The research questions that guided this study included: What role does shokuin shitsu play in beginning teacher development? What do beginning teachers experience in their daily interactions with other teachers in that space? How do they make sense of their experience? Based on these research questions, a series of interview questions were asked focusing on their experience pertaining to the shokuin shitsu. It is important to note that initial data collection began in September, 2012, and the second data collection will take place in December, 2012. As such, preliminary findings are not yet available at the time of writing this proposal and will be reported at the ISATT Conference in July, 2013.

As the focus of this study is on beginning teachers’ learning under the guidance of veteran teachers and other colleagues in the context of a highly collaborative environment, Rogoff’s sociocultural approach to understanding human behavior (1995) will be used as the theoretical framework to analyze and discuss the findings: apprenticeship, guided participation, and participatory appropriation, corresponding to personal, interpersonal, and community processes.

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**C14.1 Cultural villages as contexts for mediating culture and mathematics education in the South African curriculum**

Sylvia Madusise, Tshwane University of Technology, South Africa

**Abstract**

Mathematics and culture are often interconnected, making school mathematics intimately linked to the society in which it is taught. Some mathematics educational reform policies indicate that learners should be getting an education which is connected to their cultures. However, teaching in schools rarely brings the interconnection between mathematics and culture in pedagogically informed ways. Connections are often done superficially because of teachers’ inexperience in ways of connecting. Also, the curriculum in schools lacks content and specific strategies that enable the making of the connections explicit in the context of teaching. The study from which this paper emerges worked with three mathematics teachers in an attempt to teach mathematics in ways that connect key concepts with culture. Through mathematizing culturally-based activities performed at a
cultural village, two Grade 9 mathematics topics in the South African curriculum were indigenised. A teaching unit on the indigenised topics was designed and implemented in five Grade 9 classes at the same school. The paper demonstrates that the experience of designing, implementing, and reflecting on the intervention study had some positive contribution to the participating teachers’ pedagogical repertoire. We argue that cultural villages can be used as contexts for mediating culture and mathematics education.

C14.2 Building community through participatory approaches to local heritage studies in a rural primary school in Scotland
Elizabeth Curtis, University of Aberdeen, United Kingdom and Jane Murison, Keig School, United Kingdom

Abstract
This paper outlines the results of a pilot research study carried out as part of an Arts and Humanities Research Council (AHRC) Connected Communities-Heritage Research funded Project; ‘Sustainable community heritage in Scotland’s North East: Bennachie and beyond.’ This project brought together a range of academics from the disciplines of archaeology, history, anthropology and education to work with members of the Bailies of Bennachie (http://www.bailiesofbennachie.co.uk/) a community based group of people with an interest on the ecology, history and culture of a local hill Bennachie. The principal aims of the project were to actively involve and develop the interests of local communities including schools in the cultural histories of the engagement of communities in the past with land and resources around the hill of Bennachie.

The recently introduced Curriculum for Excellence (CfE) (Scottish Government, 2009) has put a great emphasis on the importance of Learning Outdoors (Education Scotland, 2011,(a). The idea of Learning outdoors or placed based learning is not new and in the United Kingdom and northern Europe is often most closely associated with initiatives such as forest schools (O’Brian, 2009), or outdoor pursuits such as hiking or canoeing, (Turkova & Martin, 2009), although Bentson et al.(2009) acknowledge in their discussion of the wider aims of the Danish concept of Udeskole that there is a role for outdoor learning which focuses on cultural heritage. The wider aims of CfE also includes strands relating to the Scottish Dimension (ibid,(b)) and inter-disciplinary learning (ibid,(c))and this provides the potential for an alternative framework for the development of outdoor learning which focuses attention on the cultural as well as the natural environment.

As part of the AHRC project outlined above one of the themes associated with a series of community events was related to how the implementation of the CfE could be supported through opportunities for learning outdoors with archaeology. This was supported through the work of a community archaeologist who worked in two small rural primary schools with pupils and staff to carry out archaeological fieldwork and archival work to investigate their local area. Each of the schools had roles of around 50 pupils divided into two classes. In one of the schools the head teacher decided that all of the children in the school (ages 5-12) would participate in an archaeological project within walking distance of the school. In addition to the community archaeologist staff from the School of Education and the University Museum worked with pupils to develop an exhibition of their work for the wider school community.

This paper is based on pilot research which was carried out over three months between
March and June 2012 to identify the process through which school, university and archaeological staff worked together to facilitate and support children’s learning in an open-ended child centred community archaeology project. The findings are based on reflective discussions between the head teacher, other staff in the school, community archaeologist and teacher educator and pupil’s reflections on their experiences of taking part in the project. The participants are at an early stage of analysing both verbal and visual responses to the project as recorded both by children and adults. So far there is a strong strand of evidence which supports the notions of teacher/teacher educator confidence in adopting an emergent planning framework in which the teacher is comfortable with learners taking a leadership role and having ownership of the planning and implementation of what and how they learn within the context of a local study. There is also evidence from the exhibition to support the head teacher’s belief in the role which learning about and through local heritage studies helps to make meaningful links between the school and the wider village community.

C14.3 Tradition, intercultural education and folktales form Cyprus

Panayiotis Angelides, University of Nicosia Research Foundation, Cyprus and Petros Panaou, Cardet, Cyprus

Abstract

The proposed paper presents a project that collects folktales from Cyprus for the purposes of intercultural education. Cyprus has always been a crossroad where peoples and cultures meet and interact and this historical fact is reflected in Cypriot traditional stories. So, the Cypriot teacher is empowered through this project not only to respect and promote the local tradition, but also to achieve the goals of intercultural education and respond to the needs of the contemporary multicultural Cypriot society/education. The project includes the development of a collection of folktales, educational material, and related pedagogical strategies that strengthen intercultural education and inclusion practices.

Theoretical framework-research questions. In the postmodern era, the intensified movement of populations within the international, European, and national spheres bring about modifications of the multicultural character of contemporary societies. Such differentiations characterize the Cypriot society with reference to its previous multicultural character (Damanakis, 2001). Ethnographic studies indicate that the Cypriot educational system fosters practices which merely promote the assimilation of immigrant students (Angelides, Stylianou & Leigh 2004; Panayiotopoulos & Nikolaidou, 2007). Notably, Angelides and Stylianou (2005) argue that Cypriot schools function as a pot of multicultural assimilation by merely marginalising immigrant students, who are presented as an obstacle to the smooth operation of the school. Immigrant students are differentiated from their local peers on the basis of their experiences of formal and informal restrictions, marginalisation, and discrimination.

The aforementioned considerations beget further questions about the ways in which Cypriot schools may develop and implement inclusive practices, aiming at the reduction of prejudice and marginalisation. As several theorists and researchers have asserted, literature provides a wealth of opportunities to analyze and explore issues of difference, culture, identity, ideology, exclusion and inclusion (Hollindale, 1988; Παπαρούση, 2005; Paul, 2000; Quiroa, 2001; Rudd, 1992; Stephens, 1992; Zipes, 1995).
The activities of this project are guided by the following research questions:

- How could traditional folktales contribute to the promotion of intercultural education?
- What are the educational policies, needs, and practices regarding intercultural education?
- What are the best traditional folktales from Cyprus for promoting intercultural education?
- What are the most effective approaches for utilizing traditional folktales in intercultural education?

Methodology. Twenty folktales from Cyprus were selected and analysed on the basis of their intercultural dimensions and their stance towards difference. Diverse literary theories, such as Formalism, Post-Structuralism, Psychoanalytical Theory, and New Historicism, are combined in this analysis, producing a dynamic result (Coats, 2007; Derrida, 1978; Nodelman, 1989; Propp, 1968; Veeser, 1989). Based on this analysis of the folktales, certain educational activities were designed. The activities aimed at enabling students to criticize, compare, and creatively process the stories, in order to address interculturalism and examine the position and treatment of difference within the stories (see Gannon and Thompson, 1989; MacCann, 1992; Paul, 2000).

The developed educational material was then implemented in three primary schools. The implementation was evaluated following qualitative research methods (Lincoln & Guba, 1985; Patton, 2002). In this paper, we present finding from the second phase of this project.

Expected outcomes. The project presented in this paper demonstrates manners in which folktales provide educational opportunities for the promotion of intercultural education. Educators and students can approach folktales in order to analyze and discuss their stances towards “difference,” establishing connections between the stories and contemporary experiences in multicultural societies. The discussed project aspires to combat xenophobia and racism through stories. The interesting plots of the stories, combined with playful and creative educational activities, reinforce children’s motivation to read folktales, discuss and learn through them. Reading skills, critical thinking, and positive stances towards difference and pluralism are enhanced.
DISCUSSION ROOMS

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**Will institutional performance profiles lead to greater accountability for teacher preparation program effectiveness?**

Jane Ashdown and Corinne Donovan, Adelphi University, United States

**Abstract**

New York State Education Department (NYSED) received $700 million dollars in grant funding from the U. S. government to improve public school education outcomes across the state. Critical to the success of the NYSED’s grant application were several key elements including adopting national curriculum standards, implementing a new teacher and principal performance evaluation system, and developing institutional performance profiles for every college/school of education across the state (N=130). According to NYSED documents (2012), the purpose of these performance profiles is to ensure that teacher preparation programs (TPPs) have data about their graduates that can inform program improvements, provide data to prospective candidates regarding their selection of a preparation program, provide data for studying the effectiveness of preparation practices, and ultimately to ensure that teacher preparation programs prepare graduates who can positively impact student achievement. The NYSED has recently begun to refer to the reports as institutional ‘feedback reports’ but ultimately, these reports will be disseminated to the public.

As college administrators with responsibilities for fostering program quality and teaching effectiveness, we are interested in the extent to which the variables selected by the NYSED will provide us actionable information that can be used by our TPPs to achieve the stated purposes. We are especially interested in information for program improvement purposes and feedback on our graduates’ impact on their students’ learning. Consultation between the NYSED and representatives from colleges/schools of education on the selection of variables for developing the performance profiles has been limited. The NYSED has proposed a set of data points to be included in each institution’s performance profile, but there has been little or no discussion about the extent to which these data points are useful and useable for improving program effectiveness. These data points fall into several categories. The first category is the aggregate performance of new teachers on state-wide licensure exams. This information is already publicly available and reported on annually. A second category of information will be about the employment of preparation program graduates in schools across the state, information that is currently available through an existing NYSED data base, but has not been publicly available in a format linking teachers to their TPPs. The final category of information is about program graduates impact on student learning. This is a new category that draws on results of a teaching performance assessment involving video recordings of lessons that teacher candidates will complete during their final clinical experience (student teaching) that in turn will be linked to evaluations of these same candidates once they are employed as teachers. Teachers are now required to complete annual evaluations that have been recently developed under the auspices of the grant funding referenced above. This new evaluation model – annual professional performance reviews (APPR) – calculates a teacher effectiveness rating (highly effective, effective, developing, ineffective) in part by using growth in student learning from year to year (student growth percentile) and from that calculation establish a mean growth percentile for an individual teacher based on the student growth percentiles of his/her students.
As college administrators we have a number of questions and concerns about the selection of data points for the institutional performance profiles and as a basis for judging the quality of our TPPs. Have data to be reported been identified out of convenience because they are easily available or because of their demonstrated validity with regard to assessing institutional effectiveness in preparing teachers? While using growth in student test scores as a basis for judging teacher and teacher education program effectiveness may address accountability concerns, will such analyses provide useful directions for program improvement (Henry, Kershaw, Zulli & Smith, 2012). There are some obvious omissions from the proposed performance profiles, for example, there is no mention of including reference to the P-12 school working conditions in which graduates are employed although these data are collected via parent surveys; it is not clear how institutions will be held accountable for graduates who relocate to other parts of the US or abroad. Finally, schools/colleges of education in New York State are required to be accredited by a national accrediting agency yet the profiles to date make no reference to an institution’s accreditation status nor make use of the significant amount of evidence needed to demonstrate merit for accreditation. We are also keen to learn from international comparisons of TPP evaluations and this would form the basis of the discussion room conversation.

Session number: D2  Location: Room 2D  Time: 16.15 – 17.45
Discussion room  Chair: Issa Danjun Ying

Self and community: The impact of ISATT on the professional learning, teaching and research of members in the Asia-Pacific region, supplemented by a case study on these issues from Slovenia
Issa Danjun Ying, The Hong Kong Institute of Education, Hong Kong; Amanda McGraw, University of Ballarat, Australia; Amanda Berry, Leiden University, The Netherlands; Barica Požarnik and Barbara Šteh, University of Ljubljana, Slovenia

Abstract
A key purpose of ISATT is to enhance the quality of education through improved teaching and professional learning opportunities. If social processes are inherently linked to effective thinking and learning, how can a large international association made up of members from diverse geographical settings and with diverse perspectives really have impact? This Discussion Room intends to explore and examine this key problem.

The discussion will draw upon multi-layered research conducted by Issa Ying (Hong Kong Institute of Education, China), Amanda McGraw (University of Ballarat, Australia) and Amanda Berry (Leiden University, Netherlands), which aims to investigate the impact of ISATT on members in the Asia-Pacific region. The researchers conducted a survey of members, interviewed key members in the region with sustained involvement in ISATT, and reflected on their own connections to the Association. The inquiry predominantly employs qualitative methods including self-study and narrative inquiry and also draws upon quantitative data gained through the survey responses.

The Asia-Pacific region has some unique features. For 37 out of the 74 members from 12 regions and countries who responded to our survey questions, 68% have been members for 1-4 years, 27% for 5-10 years and only 5% for more than 10 years. Consequently, this is a comparatively “young” sample of the member group but full of diversities. It seems that most members in this region are keen to share their experiences of teaching and research with colleagues, including colleagues in the broader ISATT community. The majority of the respondents reported that they ‘fed back’ their
experiences of ISATT to colleagues and students. Indeed, quite a number became ISATT members due to the recommendation of their supervisors or colleagues. We intend to tease out further these elements through the Discussion Room format in terms of the type and nature of the experiences that best support and encourage membership of ISATT. Conversation, collaboration and community can have a powerful impact on professional growth (Kitchen and Parker, 2009). In our research, narratives reported by members in the Asia-Pacific region also confirmed the central role that these elements play in creating new possibilities for learning and research. Narrative fragments taken from the data will be used in the Discussion Room to highlight significant questions which can be explored by the group. For example, some members in the Asia-Pacific region view ISATT as a platform to network with other educators and researchers, for others it is a “home” where they feel comfortable to share their ideas, concerns and challenges and feel connected. As researchers who have come together haphazardly to conduct this research, we will also share our personal stories – and the story of how over a year, we have worked to create a professional learning community within the larger association.

Key questions that will help to focus our discussion include:

- In what ways does our participation in ISATT impact on our professional learning, teaching and research?
- What issues related to teacher learning and identities emerge through our own narratives and email exchanges both as project researchers and ISATT members in the Asia Pacific Region?
- What potential do dialogical processes have for enhancing professional learning across diverse geographical settings?

The case study from Slovenia is going to illustrate the first and third of those questions: how the membership in ISATT, the ideas from conferences, formal and less formal communications with colleagues and other forms of cooperation (translations, workshops) have influenced the professional activities and beliefs of Barica Marentič Požarnik and also helped to create a small but energetic professional learning community in Slovenia. Also some obstacles in this process are going to be presented. The basis of the narrative will be a thematic interview conducted by Barbara Šteh.

**SYMPOSIA**

**Session number:** D3  
**Location:** Auditorium 1  
**Time:** 16.15 – 17.45

**Symposium**  
**Teacher identity**  
**Chair:** Christopher Day  
**Discussant:** Anneli Eteläpelto

**Abstract**

“Good teaching cannot be reduced to technique; good teaching comes from the identity and integrity of the teacher” (Palmer, 1998). Following Palmer (1998) and Olsen (2010), the focal point of this symposium is the development of a harmonic teacher identity in order to become an excellent teacher (cf. Olsen, 2010). Whether focussing on the professional identity tensions (beginning) teachers experience (Pillen et al.), on the dispositions they have (Rohaan et al.) or on their interpersonal identity (Van der Want et al), each contribution shows the necessity of a balanced identity for excellent teaching.
Discovering the secret of excellent teaching by focusing on dispositions

Ellen Rohaan, Eindhoven University of Technology, Fontys University of Applied Sciences, The Netherlands; Maaike Koopman and Douwe Beijaard, Eindhoven University of Technology, The Netherlands

Abstract
In the last two decades, increasing attention has been paid to formulating teacher standards. In general, teacher standards have led to greater consensus on the knowledge and skills that are important for the teaching profession and the curriculum of teacher education. The significance of having a valid set of competencies as a professional standard is therefore evident. However, it is slowly recognized that the way a teacher works and develops, strongly depends on the kind of person he or she is. Learning to teach is not only done “from without”, but also “from within” (Beijaard, Meijer & Verloop, 2004; Korthagen, 2004), which acknowledges that the teacher as a professional is inextricably linked to the teacher as a person. Consequently, in both scientific literature and educational practice increasing attention is paid to the more personal dimension of teaching. As Palmer (1998) argues: “Good teaching cannot be reduced to technique; good teaching comes from the identity and integrity of the teacher” (p. 10). In daily life, people talk about the ‘X factor’ of a good teacher, but most often this does not refer to technical teaching competencies, such as organizational skills. This rather touches more personal aspects of teaching. However, it is still unknown what exactly constitutes this ‘X factor’. We suppose “teacher dispositions”, i.e. “attributed characteristics of a teacher that represent a trend of a teacher’s judgments and actions” (Johnson & Reiman, 2007, p. 677), could provide an entry to unravel the secret of excellent teaching. In this study we asked ourselves the question: what makes an excellent teacher and which dispositions are essential for excellent teaching? By focussing on dispositions, we aim to achieve a better balance between the personal and professional dimension of a teacher’s professional identity. We carried out an exploratory and interpretative study with a mixed methods design. The field was consulted by means of five group discussions (round 1) with teachers (=11) and school leaders (n=4) and a questionnaire (round 2) administered to teachers (n=63) in secondary education. In this way, it was attempted to make the, often hidden, practical knowledge of teachers more explicit. Our findings showed that teachers themselves think that also ‘as a person’ they should feel comfortable in their profession. They said that in particular interpersonal skills and behaviour, including interpersonal dispositions, are essential for excellent teaching. When ranking dispositions they mentioned the ‘accessible’, ‘dedicated’, ‘positive’, ‘innovative’, and ‘integer’ disposition as the five most important ones. As a practical output of this study, a self-evaluation tool for teachers was developed, which at the moment is being tested and implemented in practice. This tool intends to help teachers to get more aware of their own dispositions and to approach their profession from a more personal perspective. Competencies should be relativized: an excellent teacher needs more than a set of technical-instrumental skills. In teacher training and professional development attention should therefore be paid to the dispositions of teachers. In our opinion, a focus on dispositions will lead to a more harmonic teacher identity, in which the professional and personal dimension are reconciled.
### A longitudinal perspective on beginning teachers’ professional identity tensions

Marieke Pillen, Eindhoven University of Technology, Windesheim University of Applied Sciences, The Netherlands; Douwe Beijaard and Perry den Brok, Eindhoven University of Technology, The Netherlands

**Abstract**

It is very important for beginning teachers to develop their professional identity in order to become a successful teacher (Olsen, 2010). Since the process of learning to teach is not only very complex, but also very personal (e.g., McLean, 1999), beginning teachers should learn how to reconcile the personal and professional sides of becoming a teacher (Alsup, 2006; Lipka & Brinhaupt, 1999; Olsen 2010). During this process, teachers may experience conflicts between what is found relevant to the profession and what they personally desire or experience as good (Beijaard et al., 2004, p.109). Such conflicts can be seen as professional identity issues, which may result in serious tensions for teachers. Professional identity tensions are considered to be internal struggles between the teacher as a person and as a professional. They may go against a teacher’s feelings, values, beliefs, or perceptions and, as a consequence, they are often not (easily) solvable. Professional identity tensions are not an unusual part of the complex process of learning to teach. They are mostly accompanied by negative feelings. For some beginning teachers their tensions led to delays in or stopping with their teacher education and/or frustrated their professional development as a teacher. It is being assumed that the way beginning teachers perceive their professional identity can be of influence on the tensions they experience (Olsen, 2010). In this study we try to find empirical evidence for this. Our research question is as follows: How can the characterizations of tensions be explained by beginning teachers’ generally perceived professional identity? This study is part of a larger study on professional identity tensions of beginning teachers. Based on a literature search and interviews with beginning teachers, a questionnaire was developed in order to gain insight in professional identity tensions. From a group of participants who completed this questionnaire twice, eight beginning teachers were selected for an in-depth interview to answer our research question. Semi-structured in-depth interviews aimed at a better understanding of the tensions that beginning teachers indicated in the questionnaires and at gaining insights into their generally perceived professional identity. The results show that tensions can be distinguished into four patterns: remaining personal tensions, remaining professional tensions, fading professional tensions and fading personal tensions. With regard to beginning teachers’ generally perceived professional identity, four aspects were distinguished. Based on these aspects, eight different ‘professional identity portraits’ were composed for the interviewees. This made it very difficult to explain the characterizations of the tensions by the professional identity of beginning teachers, although some tendencies appeared. Two beginning teachers with similar professional identities experienced tensions that were classified into the same patterns. The explanation for the characteristics of their tensions could partly be found in the way they perceived their professional identity. In general, tensions could not (simply) be related to the way beginning teachers perceive their professional identity. The findings are a first onset on gaining insights in this topic. In order to get a better hold on the way tensions can be explained by teachers’ professional identity, we need take look more specifically at how
beginning teachers perceive their professional identity.

D3.3 **Meaning making of teacher-student relationships: Teachers’ interpersonal role identity**

Anna van der Want, Perry den Brok, Douwe Beijaard, Eindhoven University of Technology, The Netherlands and Mieke Brekelmans, Utrecht University, The Netherlands

**Abstract**

In this contribution we focus on ‘teacher-student relationships’. Positive relationships with students are central to teachers’ self-efficacy, well-being and ability to teach (Day, et al., 2006). In combination with other roles, establishing and maintaining a good interpersonal relationship with students strongly influences a teacher’s professional identity (cf. Beijaard, Meijer & Verloop 2004; Beauchamp & Thomas, 2009; Beijaard, 1995). In line with Burke and Stets (2009) this role can be called the teacher’s interpersonal role identity (TIRI). They define identity as ‘the set of meanings that define who one is when one is an occupant of a particular role in society, a member of a particular group, or claims particular characteristics that identify him or her as a unique person’ (p. 3). In our research on TIRI we study the specific meanings individual teachers give to specific interpersonal situations (i.e. their perceptions and appraisals of these situations) and how they relate them to their interpersonal identity standard (i.e. their frame of reference). This standard is a powerful basis for the way teachers perceive and appraise interpersonal situations, in turn these situations may also influence and change that standard (see Figure 1). This study answers the following question: *How do teachers appraise and make meaning of specific interpersonal classroom situations and how are appraisals and meaning making of situations related to teachers’ interpersonal identity standards?* To answer this question, empirical data (from video-stimulated in-depth interviews) from 30 teachers was collected, discussing teachers’ identity standards and a total of 90 fragments (three per teacher) of interpersonal situations (lesson starts, situations in which positive student behavior occur, and lesson disturbances by students). The results suggest that for a large group of teachers, there is a match between their interpersonal identity standard and the appraisal and meaning making for interpersonal situations. Teachers who were found to have no matches between their interpersonal identity standard and the appraisal and meaning making of interpersonal situations appraised the start of the lesson and the lesson disturbances by students negatively. Compared to the other respondents, the teachers without a match gave students more freedom, were more often uncertain, dissatisfied and reprimanding. Their interpersonal identity standard however was comparable to that of the teachers with a match. The teachers without matches had difficulty relating their meaning making of interpersonal situations to their interpersonal identity standard which indicates that these teachers are not having a healthy relationship with their students and that they need support in reconciling their interpersonal identity standard and the way they appraise and make meaning of interpersonal situations.
### Session number: D4 | Location: Auditorium 4 | Time: 16.15 – 17.45

<table>
<thead>
<tr>
<th>Symposium</th>
<th>ISATT research methods/perspectives over time (Anniversary book strand theme)</th>
<th>Chair/ organizer(s): Cheryl Craig</th>
<th>Discussant: Cheryl Craig</th>
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**Abstract**

In this symposium presentation, research methods and perspectives typically employed by ISATT members will be discussed from historical and contemporary perspectives. Representative samples of particular research approaches will be shared. The following research methods/perspectives will be featured: reflexivity and reflective practice, narrative in teaching and teacher education, portraiture, and communities of practice.

- **D4.1 Narrative in teaching and teacher education**  
  Eila Estola, University of Oulu, Finland

- **D4.2 Portraiture**  
  David Goodwin, Missouri State University, United States

- **D4.3 Communities of practice**  
  Lily Orland-Barak, University of Haifa, Israel

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### Session number: D5 | Location: Room 1A | Time: 16.15 – 17.45

<table>
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<tr>
<th>Paper presentations</th>
<th>Collaboration between teacher educators</th>
<th>Chair: Natalie Pareja Roblin</th>
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**Paper presentations**

- **Collaboration between teacher educators**

**Abstract**

Introduction. Communal aspects of professional development have gained attention from researchers and practitioners seeking educational improvement. Collaboration has been shown to affect significant change among educators (Avalos, 2011; Stes et al., 2010; Gallos et al., 2005;) at individual and organizational levels (King & Newmann, 2000; Livneh & Livneh, 1999; Moore & Shaw, 2005). Organizational development theories stress integration of work and learning for individual and organizational development (Hargreaves, 1997; King & Newmann, 2000; Livneh & Livneh, 1999; Watkins & Marsick 1999; Moore & Shaw, 2005). Thus communal learning supports socio-cultural learning (ten Dam & Blom, 2006) and promotes individual professional growth and institutional change.

However, efforts to identify significant collaborative aspects promoting or hindering professional development have not been found. Learning in communal contexts is not well understood (Murray, 2008; Edwards & Protheroe, 2003), suggesting a need to analyze their inner workings. This study integrates data from four years of research on a professional development community (PDC) for teacher educators aimed at pedagogic change. Taking a
close look at our own communal enables extracting core characteristics of professional
development in community which may be applicable to similar endeavors.

Goal. The goal of this research is to closely examine learning and development processes
within a PDC to achieve a fine grained analysis of its workings. We aim to identify factors
promoting or hindering professional learning within such a community for sustainable
learning in higher education.

Procedures and participants. This longitudinal study is based on four separate yearlong PDC
projects involving twenty teacher educators who chose to study and implement thinking
education in their courses. Data was collected using a variety of qualitative methods: in-
depth individual and group interviews, session recordings, reflective writing, storyline
reflection, teaching artifacts, video recordings of classroom practice, and field notes. Data
were analyzed using grounded theory methodology (Strauss & Corbin, 2008). Identification
of preliminary categories was followed by axial coding in which data were reexamined for
similarities, differences, and complementarities across and within individual participants.
Triangulation was achieved by corroborating themes from various data sources. This
procedure revealed significant factors promoting or hindering professional learning thereby
affecting pedagogic change.

Findings. Several factors were found to promote change in practice, including: creating a
safe environment for learning, group reflection and feedback, teacher research, and
continuity. Creating a safe environment included three elements. The first was institutional
support, the second fostering a non-threatening environment enabling participants to
overcome fear of "unsuccessful" implementation, and the third included peer and
professional coaching empathetic to multiple teaching styles.

Establishing norms which encouraged daring in implementation and a culture rewarding
innovative thinking were positively related to professional learning. Group reflection and
feedback invited communication, which scaffolded new practice. Teacher educators began
to research their practice, enhancing implementation. These efforts were supported by the
PDC’s continuity. Absence of pressure extended the time frame for growth of an
organizational culture.

Breaking isolation was found in some circumstances to promote learning and
implementation while in others to prevent these processes. Collegial interaction positively
influenced professional development as a motivation for joining the group. In addition,
breaking isolation contributed to a socially appealing learning environment. On the other
hand, alliances among community members sometimes served as a socially condoned
blockage to pedagogic change. Another critical factor in preventing learning was individual
withdrawal from the PDC’s goals. Withdrawal was characterized as ‘quiet resistance’
strengthening participants’ non-learning, thereby avoiding change.

Conclusions. This study reveals characteristics of both learning and non-learning in a PDC.
Little (2002, p.937) surmised: “If we are to theorize about the significance of a professional
community, we must be able to demonstrate how communities achieve their effect”. Our
findings crystallize those processes of the PDC which are critical to learning outcomes and
pedagogic change. The importance of our analysis lies in the clear delineation of communal
processes promoting and sometimes hindering professional growth and change. This
research begins to fill the knowledge gap on professional learning in the communal context
by focusing on dynamic group processes relating to pedagogic change. Identifying these
critical factors may enable initiators of communal professional development endeavors to better understand learning in their own projects as they relate to the desired outcome of pedagogic change.

**D5.2 Two perspectives on teacher educators’ collaboration: Social networks and interdependence**  
Henderijn Heldens, Anouke Bakx and Perry Den Brok, Eindhoven University of Technology, The Netherlands

**Abstract**  
Teacher collaboration plays an important role in teacher learning. But what do we know about teacher educators’ collaboration? In this study teacher educators’ collaboration is studied at the start of an educational innovation from a social network as well as from an interdependence perspective. Aim of this study is to gain deeper insight in teacher educators’ collaborative activities in their professional networks and possible relations between both perspectives. Data were collected from a primary teacher education institute in three domains and 60 educators in total. Findings indicate that the network of mathematic educators is the most coherent; that both perspectives are related and in general the level of collaboration can be compared to teachers.

**D5.3 Teacher learning within professional learning communities: Exploring the role of facilitators**  
Leonor Margalef, Miriam Gómez, Alejandro Iborra, University of Alcala, Spain; Natalie Pareja Robin, Ghent University, Belgium; Cristina Canabal and María Dolores García, University of Alcala, Spain

**Abstract**  
Introduction. New approaches to teacher professional development converge on the understanding that teacher learning is a complex, dynamic, situated and dialogic process (Darling-Hammond et al., 2009; Lieberman & Pointer, 2008). Embracing this new vision, the notion of professional learning communities (PLCs) has been increasingly acknowledged as a powerful strategy to support professional development whilst facilitating the improvement of teachers’ educational practice (Whitcomb, Borko & Liston, 2009; McLaughlin & Talbert, 2006). There is a growing body of literature that studies the impact of PLCs on teacher learning and educational practice (e.g. Ermeling, 2010; Vescio, Ross & Adams, 2008). More recently, attention has shifted to the identification of the various factors contributing to the effectiveness and sustainability of PLCs (cf. Fulton & Briton, 2010), among which the role of PLC facilitators has been identified as central (e.g. Jenlink & Kinnucan-Welsch, 2001; Nelson, Slavit, Perkins & Hathorn, 2008; Ponte, 2002). Building on this evidence, the main purpose of the current study is to examine the role and tasks of PLC facilitators in supporting teacher professional development. More specifically, we look at (a) how facilitators perceive their role within the PLC, (b) the strategies they use to support teacher professional development and (c) the difficulties and uncertainties they face in accomplishing their role.  
The study took place in the context of a professional development initiative at the University of Alcala (Spain) aimed at fostering teacher learning and educational improvement through the development of PLC’s across various faculties. At the moment the university has more than 30 PLCs consisting of groups of up to 7 university teachers.
Methodology. A multiple case study design (Yin, 2003) was adopted to better understand the roles and functions of (university) PLC facilitators. Seven facilitators from different PLC’s were purposely selected so as to represent diversity in knowledge areas (PLCs from social as well as applied sciences were included in the sample) and in PLC stages (cases exemplified novice, intermediate and advanced PLCs). All facilitators were part of the university’s professional development staff and, although they have different professional backgrounds (e.g. educational sciences, psychology, health sciences), they all hold a specialization degree on higher education teaching. Their experience as facilitators varied, ranging from one to five years. Five facilitators were involved with the PLC from its creation, whereas the other two joined the PLC at a later stage.

Data was collected through semi-structured interviews and document analyses. Semi-structured interviews focused on the facilitators’ roles, strategies and challenges. Document analyses included facilitators’ quarterly reports and logs describing their work with the PLC, critical incidents and personal reflections. Data were analyzed inductively through constant comparisons.

Findings and conclusions. Preliminary findings reveal that the role of (university) PLC facilitators was dynamic: it had to continuously adapt to the needs of the PLC and its individual members as they worked towards improving their practice. Facilitators’ functions typically ranged from organizing the community’s work by enabling communication, identifying learning needs, and developing individuals’ and group’s confidence, to generating a context for learning by providing training and feedback, encouraging reflection, keeping a focus on concrete issues of practice, and managing conflicts within the PLC. The strategies most commonly used by facilitators included (a) providing access to relevant literature and practical examples, and (b) asking questions that could encourage teachers to reflect about their practice and explore alternative ways of action. Facilitators experienced the challenge of avoiding the image of “experts”, finding a balance between providing supports and developing PLC’s autonomy, and keeping a critical stance while simultaneously building a close relationship with the members of a PLC.

Overall, our findings confirm the key role of (university) PLC facilitators in supporting teacher professional development and practice improvement. Moreover, findings suggest the importance of providing facilitators with the necessary training and support, which in turn will increase the opportunities for teacher learning within the PLC. Key competences of (university) PLC facilitators identified in our findings relate to the facilitator’s ability to anticipate support needs, to solve conflicts, and to encourage the development of an inquiry stance. Further considerations with respect to the role and competences of (university) PLC facilitators will be discussed.
Session number: D6  
Location: Auditorium 3  
Time: 16.15 – 17.45  
Chair: Geert Kelchtermans

Paper presentations

Understanding teacher educators’ work and lives

D6.1 The profession of teacher educator: Professional roles, professional behaviour and professional development of teacher educators

Mieke Lunenberg, Jurrien Dengerink and Fred Korthagen, VU University Amsterdam, The Netherlands

Abstract

Introduction. Teacher educators play a crucial role in improving and establishing the quality of (prospective)teachers (Liston, Borko, & Whitcomb, 2008). They are, however, a heterogeneous group (Lunenberg, 2011), working in different settings (schools, colleges, universities) and positions (mentor teacher, academic staff). Following Murray and Male (2005), many authors mention developing a pedagogy of teacher education and carrying out research as critical features of becoming a teacher educator. Smith (2005) stresses that clarification of the differences between the roles and behaviors of teachers and teacher educators could support the professional development of teacher educators. In conclusion, however, clarity about teacher educators’ roles and their behavior in these roles is still lacking (Cochran-Smith & Zeichner, 2005), as is an overview of the supportive factors for their professional development. Based on a grant of The Netherlands Organisation for Scientific Research (NWO), we carried out an extensive review study, with the following research questions:

1) What professional roles of teacher educators can be distinguished?
2) What are the critical features of these professional roles and the accompanying behavior?
3) What are the critical features that support the development of these professional roles and the accompanying behavior?

Underpinned definitions of the central concepts of our study (teacher educator, professional role, professional behavior and critical feature) are fully described in the review study and will be summarized in our paper.

Methods and data sources. We followed the eight steps described by Randolph (2009) for carrying out review studies. We created an audit trail, defined the focus of the study, and searched for relevant literature (steps 1 - 3). Based on a preliminary search of three electronic databases, which yielded 1262 articles from the period between 1991 and 2011 (before the nineties of the previous century, hardly any studies on teacher educators have been published, see Ducharme, 1993), we selected 405 articles in SSCI journals or journals acknowledged by the Dutch Interuniversity Centre for Educational Sciences (ICO) that might give answers to our research questions. Eventually, on the basis of full-text reading, we selected 136 articles and allocated them to roles, behavior and/or professional development. Next, we classified the studies, created a data base and identified important themes (steps 4 - 6). For our analysis, we used a grounded theory approach (Strauss & Corbin, 1998). To enhance internal validity, two researchers, for each role, analyzed the literature on that role and the accompanying behavior and professional development. The research team met every three weeks to discuss the progress and to look for alternative interpretations (step 7). Finally, eight critical friends - members of the international
Findings and conclusions. We have identified six teacher educator roles:
1) teacher of teachers,
2) researcher,
3) coach,
4) curriculum developer,
5) gatekeeper,
6) broker.

For all these roles and their accompanying behavior we report critical features. Only for the roles of teacher of teacher, researcher and coach, we found enough studies to be able to report on critical features related with professional development.

In our paper and presentation, we will concentrate on three dilemmas connected with the development of these three roles and their accompanying behavior:
1) Our study shows that sufficient knowledge is available about effectively carrying out the role of teacher of teachers, but that teacher educators hardly put this knowledge into practice.
2) With regard to the role of researcher the ideas of Schools of Education or teacher educators institutions and teacher educators often seem to clash. Murray (2010) states that “the hard fact is that, within many other Schools of Education, teacher educators as new researchers may still find themselves struggling to reconcile their practitioner research with definitions of ‘acceptable’ and ‘conventional’ research outputs” (p. 206).
3) Research on the role of coach mainly focuses on coaching in schools. Although the view that mentor teachers should become school-based teacher educators, who help student teachers to reflect on and underpin their practices, is broadly shared in research, empirical studies show that in practice mentor teachers mainly offer students practical advice, useful for a local context only.

Based on the findings in our review study, we have formulated recommendations for further professional development that may help to overcome these dilemmas. In our paper we will elaborate on these suggestions and at the conference we would like to discuss them.

D6.2 Tensions in self-study of teacher education practices research. An international review
Eline Vanassche and Geert Kelchtermans, KU Leuven, Belgium

Abstract
In this article we report upon a systematic literature review of the Self-Study of Teacher Education Practices (S-STEP) research. This research conducted by teacher education practitioners/researchers themselves is internationally recognized as one of the most promising programs of research in teacher education (Zeichner, 1999). Using a self-study approach, teacher educators want to make explicit and validate their professional expertise and hence, at the same time, contribute to the advancement of knowledge of teacher education (o.a. Cole & Knowles, 1998). Their work is being disseminated in (inter)national journals, books, and conferences and has established itself firmly within the field of teacher education.

This paper sets as it purpose to systematically map, and critically analyze, the results of
self-study research (=its published output). We translated this general research interest into a set of inter-related research questions from which we systematically questioned the data. Firstly, what research questions are being addressed in self-study? Secondly, what are the characteristics of self-study as a methodological process? Thirdly, what are its outcomes?

Methodology. Included as data for this study was only published self-study work. A first dataset consisted of publications which were judged to be high-quality –and hence publishable– self-study work by the S-STEP-community acting in their role of editors/reviewers of the publication platform concerned. More specifically, this dataset included the International Handbook (Loughran et al., 2004), the Springer book series (Aubusson & Schuck, 2006; Farr-Darling, Erickson & Clarke, 2007; Berry, 2007; Brandenburg, 2008; Schulte, 2009; Pinnegar & Hamilton, 2009; Tidwell, Heston & Fitzgerald, 2009; Crowe, 2010; Schuck & Pereira, 2011) and the articles published in the Studying Teacher Education journal. A second dataset consisted of self-study writings meeting the criteria set by research audits external to the S-STEP-community. Both datasets contained work on self-study as a concept (its theoretical-methodological foundations) and as a set of projects (empirical self-study cases).

The publications selected for review were analyzed and synthesized in a matrix structured along our research questions (Klopper, Lubbe & Rugbeer, 2007). The matrix functioned as a conceptual framework in table format, consisting of a series of fixed columns (i.e. APA-reference, problem framing/context, theoretical framework, methodology, and results) organized around our research questions which enabled us to systematically map the content of the texts.

Findings. Our analysis resulted in the identification and description of six constitutive dimensions of self-study research. These interacting, and partly overlapping dimensions characterize self-study as a specific methodology teacher educators use to research their practice and, at the same time, distinguish it from other approaches. In the first section of this article, we subsequently discuss: the purposes of self-study (dimension 1), its research methodology (dimension 2), its research subject (dimension 3), the central role of research interactions (dimension 4), the qualities of the research process (dimension 5) and its theoretical embedding (dimension 6).

In the second section, we use the dimensions in a critical-evaluative reading of the self-study literature to put forward three tensions which deserve explicit attention if self-study indeed wants to validate its original agenda: relevance versus rigor, effectiveness versus understanding, and actor versus context.

The first tension refers to the question of quality in self-study. If self-study aspires to be ‘research’–and wants to be acknowledged as such– it should refer to forms of intentional, systematic behavior that, based on a well-articulated research interest (in terms of carefully chosen concepts) and by means of ‘fitting’ research methods, collect data on teaching practices and routines which not only result in a better understanding of that practice but, in the presentation of the research, impart meaning beyond that local setting (Kelchtermans & Vanassche, 2010, p.299).

The second tension between effectiveness and understanding refers to the need to formulate its research agenda sufficiently broad. Self-study needs to include not only technical questions of effectiveness (knowing-how-to), but a focus on the critical analysis
of pedagogical practices and the assumptions and rationales underlying these (what is happening in my practice?; why is it happening in this way?; what are the underlying assumptions about learning, teaching...?; are these sustainable?) (Kelchtermans & Vanassche, 2010).

Finally, the tension between actor and context refers to a critical awareness of the particular institutional-organizational environment in which teacher educators perform their job (and which contextualizes the object of their study). The affordances and constraints of the institutions in which teacher educators work give rise to different opportunities for conducting (self-study) research. Rather than lowering the expectations of its research agenda, we suggest the solution is in the development of partnerships between trained scholars and experienced practitioners.

D6.3 Teacher educators’ lives: Diverse paths to multiculturalism
Freema Elbaz-Luwisch, University of Haifa, Israel

Abstract
Teaching teachers is interesting, puzzling and challenging work; as one teacher educator in the present study remarked (referring to a comment by Dylan Thomas on the writing of poetry), "thank God teaching gets more and more difficult! I never found it possible to use the notes from last year, to do the same thing this year, I never found a formula for anything." While the challenging nature of teacher education should be appreciated, in fact both the education of teachers and the research on teacher education have been widely critiqued and found wanting (e.g. Fullan et al., 1998; Wideen et al, 1998). Cochran-Smith (2003) stresses the importance of taking an inquiry stance, and "conceptualizing the education of teacher educators as a process of continual and systematic inquiry wherein participants question their own and others’ assumptions and construct local as well as public knowledge appropriate to the changing contexts in which they work." In highlighting reflection on the teacher educator’s own knowledge and perspectives, the importance of the personal is emphasized. Narrative inquiry has the potential to contribute in this area, yet there have been few narrative/biographical studies of teacher educators’ lives. Weber (1990) conducted one of the first studies in which two experienced teacher educators were invited to tell “the stories within the stories” of their lives in a dialectic process of analysis and interpretation, to learn more about the process and structure of their professional knowledge. Weber concluded that her participants viewed teacher education as “a culturally generative mode of being, a primary way of seeking meaning and confirmation in their own lives by creating or protecting a legacy of pedagogical thought, theory, and action.” Both teacher educators hoped to have an indirect influence on the lives of children by influencing the practice of future teachers.

Since then, only a few studies of the experience of teacher educators have been carried out (e.g. Ducharme 1993; Acker, 1997; Cooper et al., 1999). Teacher educators’ self-study has grown in importance, and some scholars (Clandinin, 1995; Craig 2010; Vagle, 2011) have explored their own practice in teacher education. But the focus seems to be largely on professional practice at the expense of seeking understanding of teacher educators’ life narratives and their personal perspectives on teaching. This paper seeks to enrich our understanding of the lives and work of teacher educators, through examination of the life stories of two Israeli women educators who were deeply involved in addressing the multicultural nature of Israeli society in their work with prospective teachers.
For this study, individual in-depth "interviews-as-conversation" were conducted with two colleagues, one a sociologist and the other a social psychologist, both now retired, both of whom had worked in teacher education at the university level, as well as in various projects focused on the multicultural nature of Israeli society. In interpreting their life stories, I draw on diverse modes of narrative analysis (Clandinin & Connelly, 2000; Brown & Gilligan, 1993) and pay attention to time, place, and the relationships of the teller to others in her setting and to herself. The process of interpretation is holistic and foregrounds the personal, but also pays careful attention to the way the stories are told, to salient themes they bring forward, and to the ways that culture, history and politics shape the narratives (Goodson, 1992). My own story as a teacher educator is in the background, providing points of comparison with the two participants' stories. In the process of interpretation I juxtapose information about the historical time and place in which both women developed their practice as teacher educators, their disciplinary and theoretical perspectives, their institutional and political involvements on the professional knowledge landscape of university teaching, and their personal stories, in order to forge a critical distance from which to read these multi-layered narratives. The paper explores the multiple interactions of personal life narratives with the historical and political conditions of life in a society in perpetual and often violent conflict, the institutional constraints of university-based teacher education, the richness of a diverse multicultural environment and the stubborn hope for dialogue across differences.

**Session number: D7**  
**Location:** Room 1C  
**Time:** 16.15 – 17.45

**Paper presentations**  
(Online) peer collaboration  
Chair: Raija Hämäläinen

**D7.1 Changing unsafe behaviour on social network sites: Cooperative learning vs. individual reflection**  
Ellen Vanderhoven, Tammy Schellens and Martin Valcke, Ghent University, Belgium

**Abstract**

Children and adolescents are one of the main user groups of social network sites (SNS). Concerns about the privacy and security of these children are growing, since SNS are based on providing personal information to connect and communicate with others. Indeed, children face different sorts of risks, including contact risks such as privacy risks, cyberbullying and sexual solicitation (Livingstone, Haddon, Görzig, & Olafsson, 2011). To counter these risks teenagers need to develop new skills. Media education at school has been put forth as a possible solution (Livingstone & Haddon, 2009; Marwick, Murgia-Diaz, & Palfrey, 2010; Patchin & Hinduja, 2010). However, general media education research indicates that although changes in knowledge are often obtained, changes in attitudes and behaviour are much more difficult to achieve (Martens, 2010). Indeed, it was found that courses about the risks on SNS in secondary education are effective in increasing awareness about these risks, but they do not change the attitudes with regard to these risks, and they only have a limited impact on teenagers' behavior (Vanderhoven, Schellens, & Valcke, 2012).

It has been stated by the theory of planned behavior (Ajzen, 1991), that the opinion of significant others (= subjective norm) has an important impact on one's behavior.
Considering the opportunities SNS offer when sharing information - e.g. communicating (Pruulmann-Vengerfeldt & Runnel, 2012) and creating an online identity (Hum et al., 2011; Madden & Smith, 2010) - risky behavior might be socially desirable. Therefore, peers might negatively influence attitudes and prevent behavioral change. Consequently, while cooperative learning has been described as an important instructional strategy (Duffy & Cunningham, 1996), it might be counterproductive to change behavior in this particular case. More time for individual reflection might be necessary if one wants to change unsafe behavior on SNS. However, no research can be found that explores the impact of cooperative learning vs. individual reflection on reputation-related behavior. To find out whether there is indeed a different impact of a course on contact risks on SNS with an emphasis on individual reflection rather than an emphasis on cooperative learning a quasi-experimental intervention study was set up in secondary school classes.

A pretest-posttest design was used, with three different interventions between pre- and posttest: a first (control) group followed no course (43 classes), a second group followed a course with an emphasis on individual reflection (25 classes) and a third group followed a course with an emphasis on cooperative learning (43 classes). In total, 1497 pupils between 11 and 19 years old (M=14.90, SD=1.88) filled in the surveys measuring their awareness (6 items, α=.78), attitudes (6 items, α=.77) and behavior (10 items, α=.78) with regard to contact risks on SNS. All items were measured on a 7-point Likert scale (1 = low awareness/concern/unsafe behavior, 7 = high awareness/concern/safe behavior). A multilevel analysis was conducted to verify the differences in impact. Three different models were tested consecutively, with respectively the measured awareness, attitudes and behavior in the posttest as dependent variables. The pretest-score was added to the model as a covariate, and the intervention as a predictor (dummy-coded, with the control group as reference category). A multiple testing correction (Bonferroni) was applied to the significance level p=0.05, resulting in a significance of effects at the level p=0.02.

It was found that both the course with individual reflection and the course with cooperative learning had a positive impact on awareness of contact risks, as compared to the control condition (X²(1)=8.91, p<.02 and X²(1)=7.24, p<.02 respectively). However, with regard to teenagers’ attitudes and behavior, a change could only be observed when the course gave the opportunity of individual reflection as compared to the control group (X²(1)=9.91, p<.02 for attitudes, and X²(1)=5.67, p<.02 for behavior). The course with an emphasis on cooperative learning did not have any impact compared to the control group on attitudes (X²(1)=3.09, p>.02) nor behavior (X²(1)=2.69, p>.02).

As a conclusion, it can be stated that while cooperative learning is described as an important instructional strategy to increase knowledge (Duffy & Cunningham, 1996), it is less effective in changing reputation-related behavior. This has important implications for prevention-strategies, especially with regard to changing unsafe SNS-behavior. Courses in secondary education should give the possibility of individual reflection, if they want to attain a change in attitudes and behavior. Indeed, in this particular case, a problem shared is not a problem halved.
**Theoretical and pedagogical perspectives on orchestrating creativity and collaborative learning**

Raija Hämäläinen and Katja Vähäsantanen, University of Jyväskylä, Finland

**Abstract**

In a continuously changing information and knowledge society, technological and social innovations are seen as the engines for economic growth and competitiveness, and as the main prerequisites for welfare (Andiliou & Murphy, 2010; Florida, 2002). One way to promote these innovations is to support creativity and collaboration in learning and working practices (Sawyer, 2006; Shalley & Gilson, 2004). In particular, the need for collaborative knowledge construction and divided creative problem solving is suggested to be increasingly essential in tomorrow’s world because future working life is apparently becoming more and more complicated. The needs of current and future working life and society (e.g. the increasing amount of information available via the internet) also set new challenges for learning and teaching in educational contexts. Thus, 21st-century skills (Silva, 2008; Wells & Claxton, 2002) call for flexible and novel abilities in shared working practices. Therefore, the aim of education is not only to enhance the development of specific knowledge and skills, but also to support and teach collaboration and divided creative problem solving among students (Arvaja, Hämäläinen, & Rasku-Puttonen, 2009; Craft, 2008; Sawyer, 2006a; Wells & Claxton, 2002). Against this background, the significance of both collaborative learning and creativity is generally confessed. Further, supporting creativity and collaboration is often set as the target in educational settings. However, typically, it is not defined specifically to which type of learning activities and processes they refer or how they should be supported. Nor do teachers necessarily find pedagogical support for their decisions and teaching activities from curricula (Voogt, 2008). Moreover, even though there are effective ways of supporting collaborative learning and creativity, it is often problematic to enforce research findings from specific conditions (e.g. special laboratory settings) in various authentic learning contexts (e.g. Brown, 1992; Kollar, 2010) or to reach productive collaboration and creativity in authentic classroom situations (e.g. Arvaja, 2007; Sawyer, 2006).

Challenged by this situation, this paper addresses how to orchestrate collaboration and creativity in authentic educational settings from the teacher’s perspective. This paper is based on thematic review (published on journal of Educational Research Review) that presents 193 recent studies on creativity and collaborative learning from the perspective of the teacher as conductor of learning processes. We see that the precondition for the design and orchestration of these kinds of learning situations is analyzing and understanding of creative and collaborative processes and their contextual adaption. Thus, in this paper we will focus on the theoretical vantage points of creativity and collaborative learning mainly from socio-cultural perspective. Based on this theoretical grounding, we will describe principles for orchestrating productive collaborative learning and supporting creativity from the teacher’s perspective. In more specific, we will demonstrate and discuss three dimensions related to how teachers can bring about collaborative learning and creativity: (1) general pedagogical bases, (2) teachers’ pre- and real-time activities and (3) opportunities and challenges for teacher activities.

The paper will be concluded with theoretical and practical implications regarding
collaborative learning and creativity. So far, theoretical discussion has pointed to
overlapping elements of collaborative learning and creativity. There certainly is
indistinctness between the concepts of collaborative learning and creativity, but we will
here make a novel theoretical opening to understand and clarify the distinction between
these concepts. Finally, we will discuss how in practice orchestrating collaborative learning
and creativity seems to be a challenging process that balances between curriculum-based
design, theory-based knowledge and contextual necessities. This means that when
teachers orchestrate collaborative learning and support creativity among students, they
need to find the balance between different necessities, such as between design and real-
time activity, the interrelationship between instruction and improvisation and the needs of
different groups. In particular, it seems that supporting collaborative learning and creative
teaching requires the integration of theoretical, pedagogic and technological development,
as well as the consideration of teachers’ and students’ individual backgrounds and
available socio-cultural resources.

D7.3 Online reciprocal peer tutoring: A model of 21st century language teaching pedagogy
Constanza Tolosa, University of Auckland, New Zealand

Abstract
This paper reports findings from an investigation into the outcomes of an on-line
reciprocal peer tutoring writing programme between two groups of twelve-year old
students, one group in New Zealand learning Spanish as a foreign language, and the other
in Colombia learning English as a foreign language. We sought to investigate the academic,
social and motivational outcomes as students tutored each other in an on-line
environment during two school terms (16 weeks).

The study was motivated by opportunities and challenges to foreign language learning in
the New Zealand context as a consequence of a revised national curriculum which requires
all schools to provide opportunities for students aged 11 to 14 to learn an additional
language. The vision of the New Zealand curriculum for "young people who will be
confident, connected, actively involved and lifelong learners" (Ministry of Education, 2007,
p. 7) has put digital skills at the forefront of initiatives in schools and in particular for
language teaching. On the other hand, the expansion of provision has also brought
substantial challenges, including finding suitably qualified teachers (i.e. methodologically
and linguistically); recruitment and retention of students in foreign language courses; and
limited opportunities for authentic interaction with first language speakers given the
geographic limitations of the country.

An on-line peer tutoring project was established between twelve-year old students
learning Spanish as foreign language in an intermediate school (ages 11 and 12) in New
Zealand and peers of the same age learning English as foreign language in Colombia. A
quasi-experimental approach was adopted, following several principles used by Thurston,
Duran, Cunningham, Blanch & Topping (2009). The study had three broad aims: (1) to
measure the effects on own and second language proficiency; (2) to examine the impact
on motivation and attitudes towards foreign languages held by the students; and (3) to
examine the processes by which students tutor each other in the on-line environment.
Both quantitative and qualitative measures were used. The quantitative measures
consisted of a questionnaire, a first language/English (L1) test, and a Spanish (FL) test. These were designed to measure changes in ability in language (both L1 and FL) and attitudes towards additional language learning. These measures were administered on a pre and post-test basis before and after the intervention. Writing abilities in both FL and L1 were also assessed using free writing activities, administered before and after the intervention. In addition, semi-structured interviews conducted with a sub-sample of students from the experimental group aimed to explore the tutoring experience from the students' point of view including their perceptions of the project as ‘digital natives’.

Reciprocal peer tutoring is seen as a powerful enabler of cognitive co-construction when a more competent peer mediates between the new knowledge and the mental activity of the learner (Fantuzzo, King & Heller, 1992). In this form of peer tutoring each member of a dyad alternates in a role as peer tutor and tutee and is usually done with same-ability and often same-age tutorial pairs. In foreign language learning the role of peer assessment can be strongest when the peer acts as an ‘interlocutor’. In this sense the peer acts as assessor in their first languages to provide feedback to a peer working in their foreign language. Structured peer tutoring processes enhance the nature and scope of feedback (Ware & O’Dowd, 2008) given during reciprocal peer tutoring as it directs novice learners to their peers’ comments. The interaction and negotiation derived from the feedback processes facilitates language learning and promotes meaningful communication as the students engage in digital exchanges.

Findings indicate that online peer tutoring may be a sustainable model of 21st century language teaching pedagogy in cases where authentic use of the language and interaction with native speakers are limited.

**Session number: D8  Location: Room 2B  Time: 16.15 – 17.45**

**Paper presentations**

**Physical education: Research and practice**

**D8.1 Development, evaluation and multi-informant effects of a teacher training on need-supportive teaching in physical education**

Nathalie Aelterman, Maarten Vansteenkiste, Lynn Van Den Berghe and Leen Haerens, Ghent University, Belgium

**Abstract**

Students’ motivation is one of the major concerns among today’s physical education (PE) teachers. As optimal motivation toward PE is related to positive outcomes, such as concentration, higher physical activity levels, and engagement (e.g., Haerens et al., 2010; Aelterman et al., 2012; Ntoumanis, 2005), a critical question is what PE teachers can do to have a meaningful influence on students’ course-related motivation. Self-Determination Theory (SDT; Deci & Ryan, 2000) provides theoretical grounds for how the environment can promote optimal forms of motivation. Specifically, SDT posits that teachers are more likely to optimally motivate students if they manage to support students’ basic psychological needs for autonomy, competence and relatedness. Although the benefits of autonomy-support (e.g., Reeve & Jang, 2006), structure (Skinner & Belmont, 1993), and relatedness support (e.g., Sheldon & Filak, 2008) on students’ need satisfaction and motivation have previously been confirmed (e.g., Taylor & Ntoumanis, 2007), intervention
studies on the teachability of a need-supportive style are relatively scarce, especially in the context of PE (Su & Reeve, 2011). In addition, in existing intervention studies no attempt was undertaken either to involve teachers in the development of the training or to evaluate their appreciation. Furthermore, these prior studies mainly focused on the effectiveness of autonomy-support, thereby leaving out features of structure and involvement, and almost exclusively relied on self-reports tapping into students’ perceptions of teachers’ need-support.

Expanding this literature, the purpose of the present paper is twofold. In Study 1 we systematically developed and evaluated a teacher training on need-supportive teaching for and in close collaboration with experienced PE teachers. In a quasi-experimental study (Study 2) we further investigated whether PE teachers could learn to become more autonomy-supportive and structured from a multi-informant perspective.

Participants in Study 1 were 35 PE teachers (20 men, M age = 36.74 ± 11.05 years) from four different secondary schools. A half-day training consisting of three parts, that is (1) Theoretical background, (2) Overview of motivating strategies, and (3) Application exercise, was delivered to the participants. The appreciation of the training was repeatedly checked by means of an appreciation questionnaire (i.e. quantitative) and focus group discussions (i.e. qualitative) resulting in a revised training from one group to another. In Study 2, 39 PE teachers (31 men, M age = 38.51 ± 10.44 years) and 676 students (428 boys, M age = 15.49 ± 10.65 years) out of 19 secondary schools took part. Teachers were randomly assigned to an intervention (n = 15) or control group (n = 24) and were followed on two measurement occasions (i.e., pretest, posttest). Teachers’ need-support was objectively assessed based on videotapes rated by external observers using a coding scheme (Haerens et al., in revision). In addition, at the end of the lesson students filled out the Teacher as Social Context Questionnaire (TASCQ; Belmont et al., 1988) and teachers were asked to report on their teaching behavior during the past PE lesson.

Findings in Study 1 suggested that teachers highly valued opportunities for active participation, collaboration and experiential learning (i.e. microteaching) in their professional development. Of particular interest was the unexpected essential value they placed on theoretical knowledge. In addition, it was critical to be authentic to the content by delivering the training in a need-supportive fashion.

Multilevel regression analyses in Study 2 indicated that students of teachers in the intervention group experienced more autonomy-support from pretest to posttest (β = .16, SE = .08, χ²(1) = 4.09, p < .05) compared to those in the control group. With respect to structure, no significant intervention effect was found (β = .06, SE = .08, χ²(1) = .45, ns). However, a significant time effect indicated that PE teachers seem to provide less structure in their lessons as the school year progresses (β = -.10, SE = .06, χ²(1) = 3.53, p < .05). As for teachers’ self-report, teachers in the intervention group tended to report both more autonomy-support (F(1,37) = 2.41, p = .13, η² = .06) and more structure (F(1,37) = 2.97, p = .09, η² = .07) from pretest to posttest relative to teachers in the control group. With respect to external ratings of need-support, we are currently analyzing the data and will have those results available for the presentation at the conference.

In conclusion, our systematic and research-based revision process ultimately resulted in a training that concurred with PE teachers’ expectations. Furthermore, findings of the intervention study provided support that the training was effectively helping PE teachers
to become more autonomy-supportive in their teaching and that students noticed these changes in teachers’ teaching behavior. Practical implications and recommendations for future research will be discussed.

**D8.2** Observing need support and need-thwarting in physical education: Do teachers’ general causality orientations matter?
Lynn Van Den Berghe, Bart Soenens, Maarten Vansteenkiste, Nathalie Aelterman, Isabel Tallir, Greet Cardon and Leen Haerens, Ghent University, Belgium

**Abstract**

**Introduction.** Throughout their career, physical education (PE) teachers develop preferences for certain styles of teaching (Kulinna & Cothran, 2003). Little is known about the factors causing teachers to prefer certain teaching styles. In the present study, we focus on the quality of teachers’ interactions with students, thereby relying on Self-Determination Theory (SDT, Deci & Ryan, 2000, 2002). SDT states that when teachers support pupils’ basic psychological needs for autonomy, competence, and relatedness, they positively impact on pupils’ quality of motivation, psychological well-being, and behavioral persistence (Ntoumanis, 2005; Standage, Duda, & Ntoumanis, 2003, 2005). Teachers can support the students’ needs through autonomy support, structure, and relatedness support (Connell & Wellborn, 1991). Similarly, by teaching in a controlling, chaotic or cold manner, teachers can actively thwart students’ needs (Vansteenkiste, Niemiec, & Soenens, 2010). One personality disposition that is hypothesized to influence a teacher’s behavior is their general causality orientations, which refers to motivational orientations that characterize people’s global understanding of the source of initiation and regulation of behavior (Deci & Ryan, 1985, 2002; Ryan & Deci, 2002). To design targeted professional development programs it is crucial to identify groups of teachers with a profile at risk to teach in a less need-supportive and more need-thwarting way. The aim of this paper is to explore whether teachers’ causality orientations are related to his or her need-supportive and need-thwarting teaching in a PE class.

**Methodology.** Seventy-nine teachers (51.9% male, M age = 36.1 ±11.0 yrs) from 45 secondary schools completed a questionnaire on teacher and class background characteristics and on their general causality orientations. A valid and reliable observation tool developed by Haerens et al. (in press) was used to assess teachers’ need supportive teaching behavior in videotaped PE lessons. Nineteen possible need-supportive teaching behaviors (alpha=.78) were rated, reflecting four need-supportive dimensions: autonomy support (3 items, alpha=.30), the provision of structure before the activity (5 items, alpha=.52), structure during the activity (7 items, alpha=.78), and relatedness support (5 items, alpha=.85). Each of the 19 behaviors were coded on a 4-point scale every five minutes of the PE class, ranging from 0 (never observed) to 1 (observed sometimes), to 2 (observed often), to 3 (observed all the time). Similarly, a list of 16 need-thwarting practices (alpha=.78) were coded. Based on an exploratory factor analysis and the content of the items, three dimensions were distinguished: teacher control (7 items, alpha=.79), chaos (4 items, alpha=.45), and cold interactions with students (5 items, alpha=.76). Regression analyses were conducted to explore relationships between teachers’ causality orientation and their teaching behaviors.

**Findings.** Even after controlling for several teacher and student background variables,
controlled orientation yielded a significant negative relation to a composite measure of observed need support as well as observed structure during the activity. Controlled orientation also tended to relate negatively to structure before the activity, although this association was only marginally significant. No relationships between the need-supportive dimensions and autonomy orientation were found. A controlled orientation was significantly positive related to overall need-thwarting and to a controlling style and cold interactions (but not to chaos). Autonomy orientation was unrelated to need-thwarting, or to control and chaos in particular. Teachers of mixed-gender classes tended to provide less relatedness support than teachers of single-sex classes. More experienced teachers were observed to have more cold interactions. Furthermore, they tended to be more need-thwarting in general and controlling in particular. Teachers also tended to be less chaotic in classes with a larger number of students.

Discussion. A controlled causality orientation relates to more overall observed need-thwarting, and particularly to the exertion of pressure and to teachers’ engaging in cold interactions. It is hypothesized that teachers with a controlled orientation translate their personal way of functioning into the interpersonal style they use towards their students. They might have less energy available to be concerned with the students, as they are, instead, more pre-occupied with their own concerns. An autonomy orientation was unrelated to observed need support. Most of the associations for autonomy orientation were in the expected direction, yet, few of them reached the commonly accepted significance level, perhaps due to a lack of power (N = 79). An autonomy orientation might also indirectly relate to teachers’ teaching interactions through their association with teacher motivation and attitudes.

Conclusion. The results suggest that control-oriented teachers, because of their risk for low need-supportive and high need-thwarting teaching, might form a target group for professional development programs on students’ motivation.

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**D9.1** What does excellence in teaching look like? Mentors, faculty and residents design protocols to explore video artefacts of teaching
Monica Taylor, Emily Klein and Cyrene Crooms, Montclair State University, United States

**Abstract**
Our paper highlights the secondary strand of an urban teacher residency (UTR) in the US geared towards building sustainable change in urban schools through re-visioning the teacher education of math and science pre-service teachers. We describe and explore the construction and use of video protocols to build reflective practices of mentors and residents. In the US, UTRs have been created to address the difficulties of urban teacher shortages and quality. Mirroring medical residencies, pre-service teachers (residents) in UTRs serve a one-year clinical apprenticeship under the tutelage of an experienced co-teacher in a high-needs urban school (Solomon, 2009). The mission of the Newark-Montclair Urban Teacher Residency program (NMUTR) is to operate within a “third space”
in teacher education (Zeichner, 2010), seeking to realign traditional power relationships (Bhabha, 1994) and foster an arena where the roles of the resident, mentor teacher, and faculty can be reimagined.

Accepting shifting roles from teachers to teacher educators, mentors have embraced the residency and its emergent curriculum. In the fall of 2011, as professional development, mentors enrolled in an action research/self-study course facilitated by faculty who engaged in the reflective process alongside them. After the course mentors continued to meet regularly with faculty and raised the need to be more transparent about the reflective nature of their teaching through the use of a concrete text for critical discussion. They brainstormed that the use of video could help facilitate these interactions with the residents.

Using video as a teaching artifact can be useful for pre-service educators in revealing instructional thinking and connecting theory and practice (Ethel, 1999; Ethell & McMeniman, 2000; Masats & Dooly, 2011; Meijer, Zanting, & Verloop, 2002; Ottesen, 2007; Rosaen, Lundeberg, Cooper, Fritzen & Terpstra, 2008). Most work used stimulated recall, where researchers dictated what aspects of the video the mentors should examine (Clarke, 2006). Inviting mentors to decide how to use video can enhance professional growth (Carroll, 2005; Clarke, 2006) and facilitate the co-construction of knowledge (Charlies, Ria, Bertone, Trohel, Durand, 2004; Ottesen, 2007). We hoped that video would be another opportunity for mentors to do this “thinking aloud” in a way that is often hard to do in the moment of practice.

Following mentors’ request to use video with the residents, we engaged in a process of developing protocols that would suit the needs of various stakeholders. We first used a video clip from a mentor classroom to brainstorm ways that we might make sense of what was happening in the video. Next, we used a variation of a protocol developed by J.P. McDonald (personal correspondence, March 12, 2012) and brainstormed “motifs” we saw in the video clip. Each person then watched the video again using the “motifs” as a lens for making sense of it. We brainstormed variations of how we might adapt it to work with our residents given their strengths and needs, particular goals the mentors had for them, and the time of the year. We returned to the literature around using mentor video and created an extensive list of protocol adaptations that she emailed to all the mentors. Mentors then piloted these protocols with video clips of themselves and their residents teaching.

For this study, data included transcripts and field notes of meetings between faculty and mentors as we constructed the protocols, resident and mentor meetings during implementations, and transcripts of resident/mentor interviews reflecting on protocol use. Data were analyzed using the constant comparative method (Glaser & Strauss, 1967). Researchers read through the data and created early categories such as the impact of using video on mentor practice and perceived impact on resident practice. These categories were then solidified and defined.

Preliminary findings suggest mentors and residents chose protocols based on the needs of their partnership and used protocols differently, from how they focused the camera, to how they debriefed. Residents needed to be “primed” for reflection – some were not ready to coolly reflect upon their practice. Third, although we know this is a useful tool we believe it must be worked with over time; residents and mentors had challenges figuring out the best ways to use it for different purposes. Fourth, mentors found that video helped
them grow in their own practice and articulate the moment-to-moment decisions that they had struggled to articulate once a moment had passed. Finally, video helps us have difficult conversations around teacher practice and teacher identity. Here we explore what happens when faculty and mentors dedicated to inquiry-based teaching, co-construct a process for using video artifacts to help mentors articulate instructional moves.

**D9.2 Reflecting through the body: Engaging pre-service teachers in reflection on emotion**

Rachel Forgasz, Monash University, Australia

**Abstract**

The practice of reflection as a thinking process that enables continuous learning (Dewey, 1933) has been taken up widely in a range of educational and professional contexts, including many teacher education programs in which reflection is a pedagogical stalwart. Despite the popularity of reflection as an approach to professional learning within teacher education programs, Bloomfield (2010) argued that such programs needed to provide opportunities for preservice teachers to reflect on the ‘emotionally infused ambiguities, confusions, inconsistencies and resistances’ (p.233) that they encounter as they develop their professional identities. Sutton (2005) argued similarly for the importance of developing preservice teachers’ understanding of the complex nature and role of emotion in their work as teachers, noting the lack of research resources for beginning teachers about the ‘emotion-related aspects of teaching’ (232). But how might reflection on the emotional dimensions of teachers’ work be practiced? Richard Jordi (2010) argued that since our feeling responses to experience are expressed through the body, embodied processes might enable reflection on the whole “mess of human experience” (p.182). This research explores the possibility within teacher education programs of using embodiment as an approach to engaging preservice teachers in reflection on their emotional experiences of teaching.

In this paper I present the case of Dane, one of ten preservice teachers who participated in a series of embodied reflective practice workshops designed to engage them in reflection on their emotional experiences during a recent teaching practicum. Dane volunteered to be the protagonist in a workshop process called The Rainbow of Desire (TROD). A technique drawn from Augusto Boal’s (1995) system of the same name, The Rainbow of Desire invites interrogation of the dynamic tensions at play within an individual in a particular moment of action. Those tensions are exposed and interrogated in performance as that experience is framed and reframed (Schön, 1983) for the protagonist by the other participants who personify and replay the action from the perspective of each of the protagonist’s emotional states. In this sense, TROD offers protagonists the opportunity to see themselves through the multiple mirrors of their various emotional drives and responses in a given moment of action.

Employing a case study methodology, this paper draws on data from workshop transcripts and images, participant journals, and focus group discussions to explore two key questions:

- What is the particular function of embodiment as a process for engaging in reflection on emotion?
- What is the benefit to preservice teachers of participating in embodied reflection on
their emotional experiences of learning to teach?

In Dane’s case, embodiment evoked reconnection with bodily held sensations and emotions, thereby enabling him to focus his reflection on the emotions he experienced, as opposed to the actions he took, in a particular moment of action. The embodied reflective process of TROD enabled Dane to better appreciate the potential power of each of his emotional drives – both destructive and constructive. He came to understand the significant impact his emotions can have within a classroom interaction and the attendant importance of maintaining emotional self-awareness in his teaching work. Dane’s experience suggests the positive potential of using embodied processes to engage preservice teachers in reflection on their emotional experiences of learning to teach.

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<td>Elke Struyf, University of Antwerp, Belgium</td>
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**Abstract**

Education is a complex phenomenon (Doyle, 1986). Introspection and reflection with peers help beginning teachers to handle complex situations and create growth opportunities (Akbari, 2007). Reflective teachers are more confident and dare to take more initiative (Elliot, 1996). If reflection is to contribute to professional development and a higher level of professional performance, it needs to be sufficiently ‘broad’ and ‘deep’ (Kelchtermans, 2007; Jay & Johnson, 2002). In combination with a systematic completion of the five phases described in the reflection cycle of Korthagen (2005) (action – looking back on the action – awareness of essential aspects – creating alternative methods of action – trial), reflection is considered as highly qualitative.

Reflection is a complex cognitive and affective process that takes time and practice to develop (Stanley, 1998). Hence reflection has become a basic concept in teacher education all over the world. Fullan (1999) argues that only by reflection at various levels - individual and in group - teachers start to question their own practice and learn to think differently about (their) teaching and learning. To identify problems trained eyes are needed, a skill that new teachers are often missing (Schön, 1983). Experienced teachers should therefore assist novice teachers in their reflections.

In a large-scale quantitative research 208 beginning teachers indicated having a clear insight into reflection (Struyf, Adriaensens, & Meynen, 2011). The study also showed that women reflect more often and find reflection more important than men. The present small-scale qualitative study aims to get more insight in the actual reflection opportunities and practices of beginning teacher. Eight beginning teachers (3 men and 5 women, aged 22-35) from three different schools were interviewed. During the in-depth interview they were asked what reflection means for them, why, when, what, how and with whom they reflect and whether reflection is part of the induction program of their school.

A remarkable finding is that novice teachers report that they only reflect on negative experiences; they reflect in order to improve their teaching. Considering the reasons why a lesson went well does not occur to them. Classroom management is for all beginning teachers an ever-recurring item in their reflections. Reflection is considered as a ‘rather unconscious’ process ‘in their head’ and it is done mostly ‘on their own’.

All novice teachers in this study report they reflect on the technical aspects of teaching, considering the effectiveness of their behaviour. Some of them also take the moral and
emotional dimensions into account but only occasionally reflections consider the (micro-)political dimension of their actions. Considering these results, only two teachers, reflect sufficiently broad, as Kelchtermans (2007) proposes. Three novice teachers seem to make their beliefs, values and norms explicit in their reflections, indicating reflection in depth. Even when they are assigned a mentor, reflection happens only occasionally, most of the time after the mentor attended a lesson. Most beginning teachers indicate they have to reflect on their own. Only three teachers say they sometimes ‘reflect with others’, meaning they ‘exchange experiences’ or ‘discuss problems’. Also the beginning teachers themselves hardly sit down together to reflect on their actions. The small-scale study confirms that women are more likely to reflect with others, while men prefer ‘to solve their problems on their own’.

In conclusion, the qualitative study demonstrates beginning teachers’ lack of systematic reflection procedures and reveals that they seldom get the opportunity to reflect ‘deep’ and ‘broad’ with others. In this way they miss opportunities to confront their own actions and underlying values and standards with those of other beginning teachers or more experienced colleagues in order to broaden and deepen their insights with regard to teaching and education. We therefore encourage teacher-training institutes to look for a creative way to teach ‘qualitatively high reflection skills’ and to ensure that these reflection skills are still applied later in the actual classroom practice (see e.g. Mortari, 2012). Furthermore, in Flanders, there is an urgent need for qualified mentors assisting novices in reflection and lifelong learning. Deep and broad reflection should be more integrated into the induction program, e.g. through the introduction of collegial visitations or a more limited lesson schedule in order to create time for reflection.

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Session number: D10  Location: Room 3B  Time: 16.15 – 17.45

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<td><strong>D10.1  Disentangling emotions in a peer group of student teachers</strong>  Erkki Lassila and Eila Estola, University of Oulu, Finland</td>
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**Abstract**

This paper focuses on emotions that are shared in a peer group consisting of student teachers who are soon moving from teacher education to work. The paper is based on the notion, that prior research has not paid enough attention to the significance of the emotions in teachers’ work although there is a wide understanding of the challenges of the transition phase, when teachers are at the beginning of their careers. The challenges that beginning teachers face are often related to various relationships with children, parents and colleagues. Too often, beginning teachers have been left alone without sufficient organizational support to cope with the emotions they encounter in work.

The research question in this paper is the following: What and how do student teachers in a peer group tell about emotions in relations to children, parents and colleagues?

This paper is linked to three key concepts of previous research on emotions: micropolitics, emotional rules and emotional labour. Relationships in teachers’ work are formed as part of micropolitical contexts containing social, political, cultural and historical conditions and structures that determine the work (Kelchtermans & Ballet 2002). The micropolitics of an
organization influence what emotions can be expressed and what emotions are to be controlled. This phenomenon is conceptualized by Zembylas (2007) as emotional rules. To cope with these emotional rules, teachers have to perform emotional labour, which can sometimes mean masking or hiding one’s emotions (Hargreaves 1998).

The research is conducted in the wide theoretical and methodological framework of narrativity, which is beneficial in a study of emotions: As stories are based on experiences, they work as mediating tools in which emotions become contextualized in a broader social, cultural, and political context (Riessman 2008). While telling, teachers reconstruct and make sense of their lives and experiences, constructing the meaning of their own emotional experiences (Clandinin & Connelly 2000, Elbaz-Luwisch 2005, Kelchtermans 2009). We also understand storytelling as a practical tool that has meaning for teachers’ professional development and the construction of teacher identity (Estola et al. 2007).

The research material used in the paper consists of 6 video-recorded peer group sessions and reflective diaries written by the participants of the group. The peer group consisted of 10 student teachers, who came from greatly different backgrounds and also differed by the amount of teaching experience they had. There were student teachers from early childhood education and primary education programs participating in the group. The participants voluntarily attended the group as a part of their master’s studies. Two primary teachers from the teacher training school acted as mentors, and the work done in the group was based on teachers’ peer-group mentoring practice develop in Finland (Heikkinen, Jokinen & Tynjälä 2012). In the analysis, attention was paid to both content and the narrative process of the stories shared in the peer group.

As a conclusion, we examine emotions especially in teachers’ relationships with children, parents and colleagues as a part of developing teacher identity. Our focus is also on how the telling and dealing with emotions progresses in the group: we pay attention to what kind of narrative environment does the peer-group provide for sharing emotions and what kind of rules govern the emotional expression of the student teachers involved in the research.

The findings of this research contribute to developing pedagogy through which student teachers and beginning teachers could be emotionally supported in their work. Teacher education ought to be seen as a continuum reaching from pre-service to in-service teacher education: also, students have plenty of experiences about teacher’s work already prior to teacher education. Therefore, the further aim of this research is to help developing curriculum of the teacher education, focusing especially on the phase when student teachers are moving from teacher education to work.
Quantitative examination of teacher ethical sensitivity, purpose declaration and their caring teaching: Toward building a causal model
Khalil Gholami, University of Helsinki, Finland and Kirsi Tirri, University of Helsinki, Finland

Abstract
Statement of the problem. Caring practice (e.g., caring teaching, caring nursing) and ethical sensitivity are two conceptual frameworks, each dealing with moral conduct of human being in different ways. In a general sense, ethical sensitivity is “to see” salient aspects of a situation that involves the "good" and "the bad" of others (Gholami & Tirri, 2012). Weaver, Morse, and Mitcham[2008] define ethical sensitivity as "the capacity to decide with intelligence and compassion, given uncertainty in a care situation...with additional ability to anticipate consequences and courage to act". According to Tirri and Nokelainen [2007]"to respond to a situation in a moral way, a person must be able to perceive and interpret events in a way that leads to ethical action". Caring practice, and in this paper, caring teaching, however, concerns with pedagogical “actions”, activities, and decisions that teachers make in relationship with students. According Gholami and Tirri (2012) caring teaching can be reflected in the teachers' activities which address both personal and academic aspects of students in order to nurture the whole character of the students. So, while ethical sensitivity is a more general competency, engaging teachers' feeling and sense to be alert to the challenging matters of their responsibility, caring teaching is more specific and involves teachers’ action and practice. Relying on data from 556 teachers, we accordingly, want to know how teachers’ ethical sensitivity may affect their caring teaching.

Theoretical framework. Ethical sensitivity is a fundamental element of human's moral conduct. This phrase was first time coined by Rest (1983) and is the first important component of his 4-component moral action (cited in Gholami & Tirri, 2012). Narvaez has operationalized the concept of caring teaching including seven basic dimensions: Reading and expressing emotions, Taking the perspectives of others, Caring by connecting to others, Working with interpersonal and group differences, Preventing social bias, Generating interpretations and options, and Identifying the consequences of actions and options (cited in Tirri and Nokelainen, 2007). Relying on this framework, Tirri and Nokelainen (2007), Gholami and Tirri (2012) developed and validated a measure, Ethical Sensitivity Scale Questionnaire (ESSQ), to measure it in different contexts. Caring teaching, roots in moral theory such as phronesis, where a teacher is expected to conduct his/her pedagogical activities with care and deliberation. Caring teaching is mainly a relational approach involving true caring practice from teachers and affirmation of caring by students. Relying on this theory, we developed a measure, Caring Teaching Scale, to study caring teaching.

Findings. We studied ethical sensitivity and caring teaching of 556 teachers in Iran with two mentioned tools. We used structural equation modeling to test the structure of relationship between two concepts. We entered ethical sensitivity as independent variable and caring teaching as dependent variable. So, the model included 2 latent variables (Ethical sensitivity and caring teaching) and 11 indicators (7 subscales of ethical sensitivity, 4 subscale of caring teaching). After testing the model and some modifications, the model
resulted in an excellent fit with following parameter estimates: \( \chi^2/df=1.90, \text{ GFI}=0.96, \text{ RMSEM}=0.04 \). So, this measurement model showed that the observed variable or indicators were good measures of latent variables. At the end, we run analysis in different steps, where the results showed that ethical sensitivity had direct and indirect effects on caring teaching.

**Why research into teacher excellence needs to consider teachers’ emotions towards assessment**

Carola Steinberg, Wits School of Education, South Africa

**Abstract**

In South Africa, as in many countries, there is a strong push for improved learner achievement, if only to satisfy the national pride when the results of international achievement tests like TIMMS, PISA, SACMEC are made public. When the results come back less favourably than hoped, the national media looks for causes and generally finds it in the inadequacy of the teachers. The education department then implements improvements programmes to change the quality of teaching (SA examples are The Gauteng Literacy and Mathematics Numeracy Strategies) and assessment practice (e.g. the Annual National Assessments) of teachers. These policy changes are generally mandated, with teachers finding out about them on national television and feeling forced to change their practice through bureaucratic implementation processes. Neither policy mandates (e.g. the National Curriculum and Assessment Policy Statement (CAPS)) nor research into national performance (Taylor, 2008) are particularly concerned about how teachers evaluate and respond emotionally to these changes.

The doctoral research I am reporting on set out to investigate what could be learned about assessment from taking the emotions of teachers seriously. Conceptually, it starts from the premise that, like teaching, assessment is an emotional practice (Hargreaves, 1989) and makes the claim that assessment is an emotional practice that lies at the centre of teachers’ professional identity. The research draws on interviews with 19 teachers from public schools across the socio-economic spectrum from well-to-do middle class to squatter communities. Following Nussbaum’s (2001) insight that people feel most strongly about the ‘objects’ they consider important for their own flourishing, the findings reveal that teachers had three key concerns regarding assessment. Their prime concern was the achievement of their own learners (but also the learners of the school and the nation), to the extent that their sense of self-worth as teachers depended on it. Their professional concern was with their assessment practice, mainly with regard to marking fairly and giving feedback. The most intense emotions – anger, outrage, anxiety, panic – were directed at the accountability demands placed on them by the education department. For teachers, the accountability demands interfered with their ability to properly conduct their teaching and assessment work. The analysis then uses the concepts of ‘emotional rules’ and ‘emotional labour’ (Hochschild 1983, Zembylas 2005, Theodosius 2009) to explain particular emotional rules expressed by the teachers and to illustrate the dilemmas they raise with regard to accountability and learner failure. The excavated emotional rules show how the teachers have a strong inner sense of accountability to their learners that goes beyond the professional norms embedded in codes of conduct, i.e. their emotions are a reflection of their moral purposes of conducting fair assessment that adds value to
learners’ lives. The vignettes of the teachers’ emotional labour with regard to learner failure on the one hand and their institutional accountability on the other illustrate a complex position between hope and demoralization.

The implications of these findings for teacher development and educational change in South Africa point to the need for a more respectful orientation towards teachers from the side of the education department. For teachers to increase their excellence, they require emotional energy and motivation for the complex work of improving learner achievement, not to be alienated and demoralised by ever increasing bureaucracy and accountability demands.

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**D11.1 From splendid isolation to crossed boundaries? Scenarios for the future of teacher education**  
Marco Snoek, Hogeschool van Amsterdam, The Netherlands

**Abstract**

Introduction. As the quality of teachers is one of the most crucial factors in changing and developing the educational system, policies on improving education often address desired developments in teacher education. In many countries, this focus on teacher education has lead to ambitious plans towards the future of teacher education. However, such policy documents seldom take into account the fundamental unpredictability of the future, nor the opposing forces that will try to influence that future. They present a single desirable future, which leads to the question whether this future is the only and best future we can imagine. What alternative futures can be imagined and what factors will be decisive in the way that one future will prevail over the other possible futures? To get a clearer understanding of the possible futures of teacher education, scenario documents can be useful as they take the unpredictability of the future explicitly into account.

The scenario method and boundary crossing. Scenarios are consistent and coherent descriptions of alternative hypothetical futures that reflect different perspectives on past, present, and future developments. The scenario method has been widely used in business and the military to plan in situations of high uncertainty as a tool for strategic decision making or policymaking. Within education, scenario writing started in the 90’s with the work of the Global Business Network (Ogilvy 1992, 1995) and became popular through the work of the OECD (OECD 2001). As an academic instrument, future scenarios are widely used within climate studies, where they are considered as effective boundary objects (Akkerman and Bakker 2011) that facilitate discussions and boundary crossing between different stakeholder groups and their activity systems (Lebel 2010).

In this paper we take the unpredictability of the future as a starting point by studying and comparing policy documents and academic papers that present two or more alternative future scenarios. As the number of scenario studies on teacher education is limited, we also included scenario studies on education and the teaching profession and tried to identify possible impact of these scenarios for the education of teachers. The resulting set
of scenario documents were analysed and compared using the following research questions:
1) What dominant futures do the scenario documents present?
2) What unpredictable key factors are identified by scenario authors as relevant to the future of teacher education?
3) What are the implications of these possible futures for the dynamics and boundaries between the different activity systems?
4) What role can scenarios play in stimulating boundary crossing between activity systems?

Methodology. Through an internet search for original documents presenting two or more alternative future scenarios on teacher education, teachers and education, we identified 48 scenario publications, covering a period 1992–2011. These scenario publications were analysed with a classification scheme derived from Notten et al (2003):

Scenario process.
- Interactivity
- Type of stakeholders involved

Scenario content.
- Actors (Roles, relations, responsibilities)
- Factors (Internal factors, external factors)

Findings. Through the analysis of 48 scenario documents on the future of education or teacher education, we identified a set of unpredictable key factors that have to be taken into account when addressing the future of teacher education. Based on our analysis of the actors and their roles, responsibilities, and interactions in the various scenario documents, we identified four dominant futures, namely a future dominated by a bureaucratic government, by a market focus of schools and teacher education institutes, by self-steering professionals, or by a network approach unhindered by institutional boundaries. Each of these can be translated into a typical future scenario for teacher education, with differences in the way in which the three activity systems that are involved in the education of teachers (the activity system of teacher education institutes, the activity system of schools, and the activity system of policymaking) interact with each other.

Conclusion. The use of the concepts of boundary crossing and boundary objects revealed that the extent to which activity systems are open to boundary crossing and are willing to remove institutional boundaries, will largely define the future that lies ahead for teacher education. Future scenarios in themselves can play a role as boundary objects that facilitate the dialogue and boundary crossing between these activity systems.

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<th>D11.2</th>
<th>Free teacher education program: A teacher education policy in China</th>
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<td>Ping Zhao and Xudong Zhu, Beijing Normal University, China</td>
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Abstract
Aimed at attracting excellent high school graduates to join teacher education programs and to reduce the inequality in teacher quality between wealthy urban schools in eastern regions and high-poverty rural schools in western regions, Free Teacher Education (FTE) Policy was established in China in 2007. This national policy waives the tuition fees of more than 10,000 students in six top-ranking national normal universities each year while
subsidizing tuition and living expenses for their 4-years of studies in teacher education programs. In return, the policy requires students to work as school teachers in their home provinces for at least 10 years, including two years of service in rural schools in the same provinces. A total of over 34,000 students have been enrolled in the FTE program since 2007.

This study was conducted in the spring of 2011 when the first cohort of FTE students graduated and entering teaching profession. The study was conducted at Beijing Normal University—one of the six normal universities offering a FTE program. Using three types of data: 1) a survey of 470 graduating FTE students, 2) interviews of 8 graduates, 2 school principals and 3 teacher education curriculum designers, and 3) policy documents and administrative meeting minutes regarding FTE program of BNU, this mixed-methods study asked the question, “What are the strengths and weaknesses of the FTE policy?”

The analyses of the survey and interview data showed that the strengths of the FTE policy are: 1) it provides a great opportunity for western rural schools to employ high quality teachers and 2) it gives high-poverty students an opportunity to attend top-ranking universities and expand their future job opportunities. However, the analysis also revealed the weaknesses of the policy: 1) because the FTE programs cannot dismiss students for failing grades and their teaching positions are guaranteed unlike other teacher education students, some students are not motivated to study hard, 2) the consequences for breaking the contract are too harsh: they will not only have to pay back 150% of all the expenses, but also the government will keep the negative record of breaking the contract, which could affect their future employment opportunities in public sectors, 3) even if they return to their home provinces, they are usually hired by city schools, not rural schools, which does not solve the within-province inequality between city and rural schools, and 4) inconsistencies between the national FTE policy and province-level policy on accepting FTE students complicate the hiring process (e.g. some provinces accept FTE students from other provinces while the national policy require them to return to their home provinces).

This is the first systematic empirical study conducted to evaluate the FTE policy in China since its inception in 2007. Because the FTE policy is one of the major teacher distribution policies in the world, the evaluation of its strengths and weaknesses provide valuable information for policymakers not only in China, but also in other countries that suffer from major inequality in student access to qualified teachers across regions.

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**D12.1 Learning support functions: Variability of students’ perceptions**
Dominique Lagase Vandercammen, Brussels management school, Belgium and Bernadette Charlier, Université de Fribourg, Switzerland

**Abstract**
In the context of the conference on Excellence of teachers? Practice, policy and research, we would like to present some of the results of a qualitative research we have conducted in Higher Education in French-speaking Belgium. The study results could contribute to a better understanding of how to be an effective HE teacher educator (subtheme of the
This research expands the results of the thesis of D. Vandercammen (2010) which described namely four learning support functions recognized by successful HE students. Thus referring to the Deci & Ryan’s (1985) self-determination theory and to the conceptual framework of Entwistle & Peterson (2004) - showing namely how students’ perceptions of the learning and teaching environment influences student learning -, the underlying hypothesis of our research is that students’ perceptions of learning support functions in formal learning situations differ according to student’s individual characteristics.

In this study, the learning support functions are described by identifying four individuals’ basic needs, namely autonomy, competence, relatedness and situational interest. Four corresponding learning support functions are subsequently defined: autonomy support, structure, interpersonal involvement and situational interest support. The purpose of this study is to identify the variables which could understand the variability of students’ perceptions on teaching effectiveness.

In order to identify the variables which influence students’ perceptions related to formal learning situation, we have chosen to analyze five students’ interviews (Vandercammen, 2010) on their successful and unsuccessful experiences in the classroom (critical-incident technique). These experiences are linked to commitment to school activity and to quality of learning. In this context, the students were asked to describe these experiences in detail. It is noteworthy that in order to be able to explain the variability between students, we decided to cross data collected through life story and training story.

The resulting model provides a picture of the relationships between previous students’ experiences of teaching and learning, specific students’ characteristics (previous knowledge, self-confidence, abilities, motives), what they expected to learn and understand, conceptions of knowledge and learning, instructional conceptions, perceptions of the teaching learning environment, approaches to learning, perceptions of the quality of learning achieved. This research also shows the importance to introduce the variable relative to the institutional culture to be able to interpret the interactions between all these variables. Moreover, taking into account, in addition to the individual characteristics, the student’s life history helps to understand better what is occurring in the formal learning situation.

One of the significant contributions of this study is the use of a methodological approach that successfully catches the interactions among many variables that have most often been investigated in a more piecemeal way. Moreover, this research demonstrates how qualitative research can be successfully employed to address new research questions in the field of Higher Education teaching and learning.
The characteristics of the image of the teaching profession held by elementary school teachers in Japan, focusing on their view of their professional development

Hisayoshi Mori, Osaka City University, Japan; Toshitaka Fukami, Shimane University, Japan and Tetsuya Takatani, Kagoshima University, Japan

Abstract
This presentation aims to depict the image of the teaching profession held by elementary school teachers in Japan.

Currently, Japan is about to proceed with major reform of the entire system related to the teaching profession, including pre- and in-service teacher education, and teacher certification and qualification. Examples of the reforms include the transition from undergraduate to graduate teacher certification, the development of continuing in-service training systems based on lifelong learning, and the development of training programs for school leaders and administrative officers to enhance their management capabilities. Teachers’ professional development is deemed a particularly critical issue, as in other advanced countries today. Especially, people in Japan argue for the importance of reform to assessment of professional development in elementary and junior high school teachers at the compulsory education stage. In response, educational research institutions including the Japanese Ministry of Education, Culture, Sports, Science and Technology as well as teachers’ colleges and departments of education in universities have published recommendations to help teachers understand their competence and foster their professional development and growth on the basis of teacher education standards. However, because many of the changes advocated in these recommendations have a heteronomous aspect for teachers, it tends to be difficult for these teachers to realize that the changes facilitate their professional development. Some researches on teachers’ practical knowledge have found that the teachers’ image on teaching are closely tied to the specific context of their classroom, and are embodied in their classroom practices. Therefore, it is essential to comprehend how teachers themselves understand the characteristics and competencies of the teaching profession—in short what the teaching profession is to them and what skills are required to be a good teacher. Changes to policies or measures should be examined in light of these findings.

Thus, the purpose of this study is to identify the image of the teaching profession held by elementary school teachers in Japan. Specifically, this study seeks to answer the following two research questions:

1) What are the core elements of the teaching profession as perceived by elementary school teachers in Japan?

2) On what basis are some competencies considered more or less important than others?

Targeting six elementary school teachers with different levels of teaching experience, this research was carried out in the form of a qualitative study, using data collected from concept maps drawn by participants and interviews with the maps. The results confirmed that the image of the teaching profession held by Japanese elementary school teachers, who play extremely broad and various roles, has the following major characteristics:

- They perceived their role as teachers and the needed skills for professional in terms of their relationships with others (children, parents, colleagues, etc.). (Some participants
referred to their close relationship with parents and recognized that the community members in their school districts could be placed as their critical friends for their classroom and school practices.)

- Their image of the teaching profession was complex; they accommodated seemingly conflicting beliefs and ideas in constructing this image. (Some participants recognized that they had both confirmed and flexible beliefs on teaching such as everlasting teaching style and learning from others or modifying the style.)

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<th><strong>TD's power to shift teacher perspectives on communication</strong></th>
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<td>Hiroko Suzuki and Peter J. Collins, Tokai University, RIED, Japan</td>
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**Abstract**

The common 20th century perception of English as a foreign language (EFL) is yielding to a new understanding of English as an international language (EIL) in the 21st century. This lingua franca notion recognizes English as a key skill for successful communication in today's increasingly globalized society (Graddol, 2006). To become full participants in this society, we must be able to think logically, flexibly, and productively, work both autonomously and collaboratively, and construct mutual relationships with others.

Most English language teaching in Japan, however, is still based on a perception of English as a body of knowledge to be internalized (Hanks, 1991; Suzuki & Collins, 2006). As a result, classrooms are rigidly controlled, reflecting linguists’ analyses of English as a native language and consisting almost entirely of grammatical formulas and vocabulary items with fixed Japanese translations. Typical teacher development (TD) options open to Japan’s English teachers, limited to lectures on linguistics methodology, only exacerbate the situation. Teachers have few, if any, opportunities to explore the notions of either using English for communication themselves or their students appropriating the language as a communication tool (Suzuki, 2007; 2011).

If English teachers are to move past traditional assumptions about language learning and teaching, teacher educators must develop TD program goals and contents that nurture the notion of language as situated (Gee, 2001) and as a tool for constructing empathetic relationships with others. In response to these needs, this paper will introduce an in-service TD program established by the Communication Department of Tokai University’s Research Institute of Educational Development (RIED). Now in its 15th year, the program nurtures the communication skills required in EIL by both the participants and their own students. Its focus, however, is not limited to building participants’ language fluency; the goal is for participants to advance their English ability incidentally while engaging in a variety of experiential learning contexts (Engeström, 1987; Cole, 1996). Key experiential components include a series of reading-writing workshops, drama performance (Fine, 2011), formal debate, and cross-content collaboration. These activities help participants construct L2 speaker identities for themselves.

RIED’s TD program supports participants in their exploration of ways to build a collaborative classroom environment that is based on mutual understanding and mediated by the English language. Over the years, the program’s framework has evolved to emphasize such key aspects of the learning experience as cognition, autonomy, and motivation. It has also been expanded to encompass three core components. The first is a series of seminars advancing individual teachers’ communication skills and providing
opportunities to construct collaborative relationships, experience empathetic and mutual understanding, and reevaluate the self in the context of language learning and teaching. The second is a series of parallel school projects designed to explore educational reform at the departmental level. The third promotes regional partnerships that strengthen schools’ relationships with their surrounding communities.

Many English teachers in Japan continue to report that, for a variety of reasons, they seldom collaborate with their colleagues on goal-setting, lesson planning or the creation of teaching and testing materials (Collins, 2005; Collins and Nakamura, 2007). RIED’s TD Program invites participants to continually investigate issues of teacher autonomy and collegiality, nativeness and non-nativeness, and the challenges inherent in cross-cultural team-teaching relationships (Collins, 2009). The TD’s information and communication technology (ICT) components provide participants with additional opportunities for immediate reflection and interaction with overlapping communities of practice (Wenger, 1999). Over the course of the program, these ICT aspects also support them in applying their evolving understanding to their own teaching practice. Finally, the action research component, culminating in a classroom protocol analysis and portfolio presentation, fosters reflection-on-action (Schön, 1995) and empowers participants to continue reimagining language learning and teaching for themselves after they have completed the program.

The presenters will share two recent case studies revealing the highly individual nature of each participant’s interaction with the program’s contents, TD instructors and TD peers, as well as their own colleagues and students. In the face of the numerous challenges presented by their teaching contexts, these two participants demonstrated perspective shifts toward English as an essential tool for communicating, negotiating, and clarifying their own and others’ roles in today’s world. Quantitative and narrative data from the participants provide valuable insight into the ways in which the program has supported them in reflecting objectively on their students and their own development and suggest ways to further improve future TD programs.

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<td>Excellence of teachers and teaching in primary education</td>
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Sabrina Vandevelde and Hilde Van Keer, Ghent University, Belgium  

Abstract  
Problem statement. Among educational researchers, there is a broad consensus that self-regulated learning (SRL) leads to success in and beyond school (Zimmerman, 2002). Research, however, also shows that students do not become self-regulated learners spontaneously (Schunk, 2001) and that teachers play a prevalent role in stimulating SRL (Dembo & Eaton, 2000). In this respect, the extent to which teachers stimulate SRL and the factors facilitating or hampering the implementation of SRL practices is a challenging issue in both educational research and practice.

Theoretical framework. SRL is generally viewed as a complex, multi-faceted process that
integrates metacognitive variables (e.g. orientating, planning, self-monitoring, and self-evaluating), with cognitive (e.g., learning strategies) as well as motivational aspects (e.g., self-efficacy, task interest) in order to effectively regulate one’s learning process (Pintrich, 2004). Research has shown that learners who possess self-regulatory skills, experience more successful educational trajectories (Zimmerman, 2002). However, the majority of learners encounter difficulties to regulate their learning and the degree of efficiency in using self-regulatory strategies largely varies among learners (Winne, 2005). Therefore, recent research stresses the importance of stimulating SRL early in students’ educational trajectories and provide instructional guidance at primary school (Dignath & Büttner, 2008). In this respect, the present study focuses on primary education.

As research states that SRL is strongly influenced by classroom practices, teachers play a crucial part in developing pupils’ SRL (Boekaerts, 1997). Based on the literature, several guidelines for teachers can be deduced regarding how to promote SRL, like modelling, scaffolding, creating a powerful environment and explicit instruction of strategies (Kistner, et al., 2010). Unfortunately, research shows that in today’s classrooms few teachers effectively prepare their students to learn on their own and external regulation prevails largely over self-regulation (Zimmerman, 2002). These findings underline the importance to get a more clear view on the determinants influencing the implementation of SRL practices. Following Lombaerts, Engels, and van Braak (2009) those factors can be situated at three levels: (1) teacher level (e.g., teacher characteristics and beliefs); (2) class level (e.g., grade and class size); and (3) school level (e.g., school culture and professional development).

Research objectives. The study aims to explore (1) primary school teachers’ actions in stimulating SRL and (2) teacher, class, and school-level factors encouraging or hampering implementation of SRL practices.

Methodology. 162 primary school teachers from 17 Flemish schools completed a questionnaire assessing (1) demographics; (2) educational beliefs using the Beliefs about Primary Education Scale (Hermans, et al., 2008); (3) actions in stimulating SRL using the Self-Regulated Learning Inventory for Teachers (Lombaerts, et al., 2007), and (3) factors stimulating/hampering promotion of SRL using open-ended questions. To gain more in-depth information about the latter, also semi-structured interviews (N = 5) were conducted with the person(s) who coordinate the initiatives regarding SRL on school level.

Results and Discussion. Despite the importance of SRL, this study confirms prior research (Lombaerts et al., 2007) that primary school teachers stimulate SRL only to a limited extent. The results show no significant effects of teachers’ gender, age or teaching experience. Further, teachers in higher grades and teachers with smaller classes integrate SRL more often. Also teachers holding developmental educational beliefs and acknowledging the value of SRL, report a higher occurrence of SRL practices. In this respect, the results support the assumption of congruence between beliefs and practice (Hermans et al., 2008). Consequently, a first step towards implementing SRL, should be the examination – and if necessary – modification of deeply ingrained assumptions and beliefs. Therefore, SRL instruction for pre-service teachers and professional development for in-service teachers should be accompanied by consideration of their personal beliefs both regarding education in general and regarding SRL in particular. This also implicates a call for further research. Although the current literature provides information on the
characteristics of learning environments stimulating SRL, there is still a gap in the research about how teachers can bring SRL into the classroom and how teachers can be supported to do so (Dignath & Büttner, 2008). At school level, the participants reported a clear view on SRL and a school culture fostering collaboration among teachers and commitment to continuous improvement as important stimulating conditions. Perceived pressure of time and work, and the diversity between pupils are regarded as the most important barriers to promote SRL.

Based on the present study, further research can elaborate on the determinants of SRL practices in primary classrooms by integrating (a) determinants on pupil level, like motivation, cognitive and metacognitive abilities; (b) additional teacher variables, like their knowledge and skills to foster SRL and to coach students’ self-regulated learning.

**D13.2 The impact of a teacher professional intervention on wait times**
Maria Lucero, Ghent University, Belgium

*Abstract*
A teacher professional development intervention was set up in public primary schools in Ecuador to improve teachers’ questioning behaviour during 6th grade science lessons. In this paper we focused on teachers’ use of wait times, i.e. time to think after making a question and time to think after getting an answer. Our learning objectives were not only regarding teachers' knowledge and behaviour but also their attitudes towards waiting. Compared with the control group (n = 5) we succeeded in increasing the frequency of wait times in the experimental group (n = 6); we also controlled for the effect of pre-test scores.

**D13.3 Pedagogy in small primary schools – The value of multi-grade teaching**
Eeva Kaisa Hyry-Beihammer and Tina Hascher, University of Salzburg, Austria

*Abstract*
This paper aims to understand the value of pedagogy of small schools in Austria and Finland. In this paper, a small school is defined as a school with fewer than fifty students. Usually it is a village primary school (in an Austrian context grades 1–4, children aged between six to nine, called Volksschule; in a Finnish context grades 1–6, children aged between seven to twelve). Small schools locate usually also in a rural area. Typically there are two or three teachers teaching different grades in the same class; this is called multi-grade or multi-age teaching. In the school year 2009–2010 there were 1,909 multi-grade classes in Austria and 722 small schools in Finland. During the last twenty years, the number of small Finnish primary schools has decreased by 65%. Besides in Austria and Finland, small schools are under the threat of closure in many other European countries. Closures of small schools are often explained by economic reasons: small schools are too expensive, and it is cost-effective to transport children from villages to bigger centre schools (see, e.g., Knauf, 2010, p. 162). It seems that the significance and possibilities of pedagogy in small schools have been ignored when schools are closed.

Our study asks, which advantages and challenges does multi-grade teaching have to school education? This is answered by analyzing different teaching practices that are used in multi-grade classes. As empirical data is used ten narrative teacher interviews (Riessman 2008) and teaching observations that have been collected in four small primary schools in Austria and Finland during 2011–2012. On the basis of the content analysis of transcribed teacher interviews and teaching observation, the multi-age group processes and social
forms that are used in multi-grade teaching are explored. The main categories “split timetable” and “common timetable” are used to analyze how teachers share time between different grades during teaching and how students in each grade may study the same subject at the same time (Cornish, 2006). The main categories, “whole-class teaching,” “within-grade grouping,” “cross-grade grouping” (different grades in the group), and “free choice group” are used to analyze how students are grouped during teaching (Cornish, 2006; Petersen, 1927/2001). Of special interest is how teachers use differentiation in their teaching in multi-grade classes, and therefore “differentiation” has been chosen as a main category, too. The educational forms of play, work, and celebration suggested by Petersen (1927/2001) are also analyzed in the data of this study. We are especially interested in the natural processes of helping and being helped in multi-age groups defined by Petersen (1927/2001); more specifically, we are interested co-operation or peer learning or peer tutoring. The processes of co-operation in multi-age classes are explored also through Lev Vygotski’s (2002) socio-cultural learning theory.

Based on the first research results, it is clear that diverse teaching practices are used in the multi-grade classes in small schools. The results show that teachers find one of their most important and challenging tasks how to answer the needs of different learners in their classes. Expert teachers tend to work like multi-age teachers, looking at each student as an individual and orienting their teaching according to each individual’s needs. This becomes apparent from the different forms of differentiation teachers used. Younger teachers in particular express uncertainty about how to divide their time and how to use different forms of student groups in a multi-grade class in order to enhance learning in the best possible way. One method is to use “subject staggering;” which is teaching two different subjects concurrently, concentrating on “important concepts” by teaching one grade while the other grade works silently. According to research results, peer tutoring and learning occur spontaneously at classroom but teachers can use peer tutoring also as an intentional teaching strategy. Peer learning happens also tacitly, e.g. students in lower grade learn the common practices of the school from upper grade students. Teachers find that this type of student helping decreases their work, too. In the teachers’ narratives, the schoolyard seemed to be a central place where pupils play and take part in activities with other pupils and also with teachers. In particular, play and festivals are educational forms that are connected to situations when the whole school participates and the events occur mostly outside of the classroom.

The research results challenges teacher education: On the basis of the data, teacher education students have had only a little or not at all instruction concerning teaching in multi-grade groups, so we can expect that those teaching skills are mostly learned through practice. We suggest that teacher educators and researchers should become more aware of good teaching practices in multi-grade teaching like differentiation and multi-age teaching. That would add our understanding of the qualities and prerequisites for good teaching in heterogeneous student groups.
Cultural perspectives on teacher identity and teacher commitment

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Exploring first year teachers’ identity transformation through theatre-based research
Michelle Ludecke, Deakin University, Australia

Abstract
Why are beginning teachers leaving the profession in large numbers? Are they leaving because of their dissatisfaction with teaching? Are they leaving because of the conditions of their work that shape their identity?

Teacher identity work emphasises it is important beginning teachers understand their professional identity as something shifting, fluid and emerging – not fixed. These and other water metaphors – such as ‘washout’, ‘sink or swim’, and ‘thrown in the deep end’ – are often used to describe beginning teachers’ experiences. Such words and metaphors assist to portray the fluid and unpredictable nature of identity transformation. However, these survival terms also influence beginning teachers to believe that their transition to teaching will be difficult. Recently there has been an increased concern over beginning teacher attrition linked to the difficulties they encounter in their early years of teaching. Yet the conditions of beginning teachers’ work in Victorian schools in Australia – including the contractual nature of employment of first year (1yr) teachers – encourage these 1yr practitioners to view their work as semi-permanent. As a result these 1yr teachers do not see themselves as teaching for extended periods of time, as was once the case.

Throughout 2011 twelve 1yr teachers shared their experiences of identity transformation in semi-structured interviews with the researcher. Their interview data was analysed through a theatre-based research method, examining how first experiences shape teachers’ future practice and identity. This presentation includes excerpts from the theatre-based research performance ‘The First Time’, and expands on the methodological approaches taken to analyse the data in a way that reflects the fluid and unpredictable nature of teachers’ identity formation and transformation. This qualitative study allows categories of description to emerge from the data rather than pre-determining categories of investigation. As such the processes of scripting, rehearsing, and performing, were utilised to analyse and re-present the data. In an aim to uncover questions that have been buried by answers, the research is oriented as a phenomenographic inquiry. This mode of inquiry seeks to describe, analyse, and understand the qualitatively different experiences 1yr teachers undergo in their identity formation and transformation.

The results of this research reveal that beginning teachers’ identity transformation through their first experiences have both individual features specific to each teacher’s roles and aspirations, and extra-individual factors such as interactions, affiliations, and status, which shape their identity. Categories of description that have emerged from the analysis include survival, liminal, and hegemonic discourses, artifacts as symbols of belonging, and the impact of the contractual nature of teaching.

Implications of this research focus on the importance for beginning teachers to develop an understanding of the transformative nature of identity in relation to the practice of
teaching, to counter the negative preconceptions beginning teachers are told to expect as rites of passage upon entering the profession. The research outcomes have implications for teacher educators and in-service teachers negotiating the waters of an ever-changing profession.

D14.2 Commitment crisis: Voices of secondary teachers in Seychelles
Odile De Comarmond, Jane Abbiss and Susan Lovett, University of Canterbury, New Zealand

Abstract
Teacher commitment has been widely theorised and explored in the context of developed western nations (Crosswell, 2006; Day, Sammons, Stobart, Kington, & Gu, 2007; Rosenholtz & Simpson, 1990; Tyree, 1996), but little research has been conducted in developing nations (Joolideh & Yeshodhara, 2009; Mohan Raju & Srivastava, 1994). My study expands the framework of research on teacher commitment within a specific developing country, the Seychelles, using a phenomenographic approach. The aim of this paper is therefore to explore the conceptions of teacher commitment from the experiences of secondary teachers themselves in order to obtain a better understanding of what keeps teachers in their roles or why they leave teaching. The issues being addressed in this paper are of particular relevance for Seychelles where there is a shortage of young people joining secondary teaching and concerns about teacher quality and students’ achievements. My study also offers insights to other countries as commitment, retention and attrition are worldwide concerns. Data reported in this paper offer the voices of teachers within the profession, whereas my larger study includes voices of teachers who had left, headteachers and policy-makers.

Views are gathered from three groups of participants representing different career stages: five newly qualified teachers, five mid-career teachers and five experienced teachers. The study adopts a qualitative design to focus on the lived experiences of participants in a specific environment. It utilises phenomenographic and multiple case study approaches. Variations in ways of experiencing the phenomenon of teacher commitment are of particular interest sourced from individual interviews.

The findings show that participants in this study have different perceptions of teacher commitment which have been ascribed to four main categories: (1) altruism; (2) personal attributes; (3) pedagogical content knowledge; and (4) connectedness. Although there are subtleties in levels of commitment for the three different groups of teachers, the findings show that commitment levels wax and wane across teachers’ career. Teachers’ commitment levels are closely related to their initial motivations to teach. Factors which impact on teachers’ commitment across the career stages are captured from the teachers’ accounts of their career decisions. The analysis shows teacher commitment to be a complex phenomenon which is best understood within the particular context of the individuals and their employing schools. The findings offer a series of questions and challenges for policy-makers within a national context in supporting secondary teachers to enhance their levels of commitment, and through developing their sense of efficacy and their professional identities.
### Abstract
This study explores how Chinese teachers in different historical contexts constructed their teacher identities. It aims to address two pertinent questions: how did the Chinese teacher give meaning to their work or who they thought they were as teachers in different historical era in China? Are those identities showing any patterns?

Based on 22 sample teachers’ narrative (diary, biography and face-to-face interview), the research findings suggest clear differentiation of teacher identities through time. In the traditional China, teachers performed their roles while unwilling to accept their status as a teacher. They considered themselves as “Shi” and took “inner sage, outer king” as their aspiration and the sources of meaning for their existence. During the late Qing Dynasty and the Republic of China period, two identity patterns emerged among teachers: “Torchbearer” and “Professional”. The former enlightened people through education in order to save the nation. The latter derived its meanings from education per se. After 1949, when the People’s Republic of China was established, education was considered as a tool to serve the proletarian revolution and socialist construction. Teachers were encouraged to be “People’s Teachers”, which meant dedicating themselves to the socialist education as advocated by the Communist Party of China as their raison d’etre. With the implementation of reform policies in 1978, education was designated a tool for economic development and the teachers were required to improve their expertise. “People’s Teacher” was differentiated into two types: “Specialist in teaching” and “Educator”. However, given the strong instrumental orientation of the “Project of Teacher Professionalization”, young teachers were put in an awkward position, often having difficulties in choosing their paths of identity construction.
### Structured Poster Sessions

**Session number:** E1  
**Location:** Room 2D  
**Time:** 10.00 – 10.45

**Structured poster sessions**  
Chair: Antonia Aelterman

#### Excellence of teacher education

**E1.1 Comprehension of tacit knowledge future teacher gain in the processes of their teaching practice**

Vlastimil Svec, Jana Kratka and Jarmila Bradova, Masaryk University, Czech Republic

**Abstract**

The excellence of teachers is – besides the other – determined by the quality of their tacit knowledge. The importance of tacit knowledge in teacher expertise has become the focus of considerable attention in the recent literature. Our understanding of tacit knowledge creation in a process of teacher education is however limited by lack of conceptual framework grounded in empirical data. One of the reasons is the fact tacit knowledge is context determined and therefore imposes methodological challenge upon the researcher aiming to grasp it in a particular setting.

Our project is based on the assumption that tacit knowledge involves two basic components: cognitive (mental picture of activity) and non-cognitive (motivation to work). They derive from the student’s subjective theory of teaching and the student teacher acquires them during teaching practice by resolving practical situations. We assume that the tacit knowledge of student teachers is shaped by the perception and solution of practical situations, life experiences, experimentation, improvisation and creating solutions on the basis of the practical requirements of a given situation. Because of tacit knowledge is developed through a deep personal and emotional commitment to a problem to be solved, the unexpected situations have a motivational effect.

The process of acquiring tacit knowledge facilitates both student self-reflection, as it allows the student teacher to realise these skills (or at least a substantial part of them) and make them explicit, and also the sharing of their experiences with experienced teachers. Even if student teachers acquire tacit knowledge independently, relatively unassisted, it is desirable to provide them with external support and feedback; the formation of tacit knowledge makes the sharing of experiences of students with teacher educators or an experienced mentor at their teaching practice easier.

The main objective of the research is to find out how the tacit knowledge of the future teacher is created during his/her teaching practice. Specific research questions are as following:

1) How does student teachers’ subjective theory of teaching change during their teaching practice?  
2) What does the sharing of experiences of student teachers and mentors consist of? How do student teachers and their mentors perceive the sharing of teaching experiences?  
3) What unexpected practical situations do student teachers come across during their teaching practice? How do they cope with them?  
4) What do student teachers in the course of self-reflection become gradually aware of?  
5) Does the preparation of student teachers for their lessons differ from what really happens? If so, what is the difference? How do student teachers explain this
The methodology of the project is based on qualitative research methods. As different methods are used for the data collection in one semester, they are for enhanced transparency outlined in the bellow chart:

**Research question: 1.**
Research method: Semi-structured interviews with student teachers
What the method investigates: Student teachers’ subjective theory of

**Research question: 2.**
Research method: Unstructured observations of student teacher and mentor interaction (after selected lessons); Focus groups with student teachers and mentors (after a series of lessons)
What the method investigates: Development of sharing of teaching experiences;
Student teacher’s and mentor’s perception of the effect of sharing teaching experiences

**Research question: 3.**
Research method: Focus group with students (after series of lessons)
What the method investigates: Description of unexpected situations and explanation how solution was found

**Research question: 4.**
Research method: Content analysis of student teachers’ written self-reflection
What the method investigates: Student teachers’ realisation of (recollections) significant moments in their practical activities

**Research question: 5.**
Research method: Content analysis of student teachers’ preparation for their lesson Video stimulated recollections from lessons
What the method investigates: Differences of the lesson plan from what really happened in the lesson; Explanation of the differences with the student

Additional method applicable to all research questions is a reflection of the researcher notes, acquired by all individual members of the research team.

The sample consists of selected student teachers of the fourth year of the Master’s programme at the Faculty of Education of Masaryk University. The sample is heterogeneous in terms of approbation of subjects.

Data analysis is based on the design of grounded theory. Case studies of selected students are used as a complementary design. We expect that these will illustrate the results of the analysis of data obtained through the grounded theory and will lead to the expected results demonstrating the relation between student’ subjective theory of teaching and the process of formation of tacit knowledge: a mental picture of activity - the motivation to work.

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**E1.2 To practice the movement of thought: Teaching educational theories in Chinese teacher education program**

Huajun Zhang and Yan Hu, Beijing Normal University, China

**Abstract**

Problem Statement and Research Question. The course on educational theories is a required course in teacher education program in China. However, students often consider
this course as a useless one and take it for acquiring necessary credits only. Students’ common understanding of this course is to get some knowledge foundation on education: to obtain basic literacy for being a legitimate student in an educational program. Learning educational theories is often thought as unrelated to teaching practice and solving real problems in teaching.

The serious split between theory and practice in student teachers’ mind urges Chinese teacher educators to reconsider the objectives and pedagogy of the course on educational theories. As a teacher educator myself, the purpose of this study is to explore the possible objectives of this course and the appropriate pedagogy to meet the objectives for educating student teachers. In this study, I ask the question how to teach the course of educational theories to motivate student teachers to unify the split between theory and practice.

Theoretical Framework and Methodology. The design of the course applies John Dewey’s idea on the relationship between theory and practice. In Dewey’s view, learning of theory is not for directly guiding practice but to understand the movement of thought, an important aim of teacher education (Dewey, 1904). He defines the process from identifying a problem to solving the problem with the method of intelligence as the practicing of the movement of thought (Dewey, 1944). In Dewey’s philosophy, teachers cannot simply learn existed theories as truth and apply them to real situations. Instead, teachers need to learn solving teaching problems—including teaching and other issues related to students’ development—in concrete and changing situations. Therefore, I suggest that an approach to teach this course of educational theories is to help student teachers understand the movement of thought through critically reading theoretical works on education.

This is an action research based on the course of educational theories I teach for the first-year graduate students at Faculty of Education in a Chinese normal university. A learning community is built up to help the teacher and students fully communicate with each other. The communication is extended from the three-hour class once every week to a website discussion based on the electronic blackboard. The teacher leads the directions of reading and discussion but also encourages students to criticize the learning material and bring up their own concerns and interests via various ways of expression, including memos, in-class discussion, group projects, etc.

Findings and Conclusion. In the past two years of the study, there are two major findings emerge through this action research:

First, we have intensive discussion on topics such as the relationship between self and society, social justice, the value of history to education, the power of culture and other related topics. The hot events happened in the society are used as cases in the discussion. Through discussion and self-reflection memos after each class, I find two contrasted trends are obvious among student teachers: either the students hold a utopia view that education is a magic for solve social problems or they hold a pessimism view that an individual teacher can do nothing for social progress. Through the intensive practice of the movement of thought, student teachers gradually develop deeper understanding on the possibilities and limitations of education and what an individual teacher can do and cannot do in concrete problems of teaching.

Second, understanding the movement of thought by learning educational theories is also a moral appeal for student teachers to ensure their decisions and actions would not harm
students. Through the learning of the course, we explore the power and limitation of thinking and expand our capacity of reasoning to broad social and historical contexts. We reach the common understanding that we can never give up using the power of thinking in concrete conditions if we want to do good for students. This is an ongoing study that a final conclusion is too early. However, it is confirmed that practicing the movement of thought in the course of educational theories helps students reflect their understandings on education and close the gap between theory and practice. Therefore, at the end of the course, students do not just memorize some educational theories without knowing how to solving the real problems in teaching. Instead, students develop critical visions on the possibilities and challenges for the individual to promote social progress through education.

E1.3 **Creative little scientists: Design of a set of teacher education guidelines**
Marijke De Smet, Kirsten Devlieger and Hilde Van Houte, Artevelde University College, Belgium

*Abstract*
This paper reports on the design of a set of curriculum guidelines for European initial teacher education and continuous professional development programs, which will foster creativity-based approaches to science and mathematics learning in preschool and the first years of primary education.

E1.4 **Docentenstage: A tool for continuing professional development of teacher educators**
Joke Simons and Nele De Witte, Lessius Mechelen, Belgium

*Abstract*
Context. Teacher educators are sometimes accused of being unaware of the daily educational reality in primary and secondary education, the educational contexts where their students will be working. Authentic experiences, however, are considered to be important to a high quality teacher education, as is pointed out by students, their mentors in the work field and the available research (Korthagen, Loughran & Russel, 2006; van Velzen & Volman, 2009). This (recent) experience allows teacher educators to prepare their students to become creative, flexible professionals who can model the learning process. (Snoek, 2004; D’hert, 2006). Teacher educators themselves are also signalling a lack of experience with specific target groups and feel the need to give their insights a reality check.

In the last decade, workplace learning became one of the key concepts for informal learning in professional context. Teacher education in The Netherlands and Flanders focusses on the added value of the combined knowledge and skills from teacher educators in higher education institutions and their colleagues-mentors in primary and secondary schools. (The concept of “samen opleiden”)

The project “docentenstages” examined whether and how jobshadowing offers an answer to the need of continuing professional development of teacher educators. How can this be organised as a means of tightening the relations between teachers and teacher educators? What is there to gain for students, teachers and teacher educators?

Design and method. The project, a two year study conducted by staff members of Katholieke Hogeschool Leuven, Katholieke Hogeschool Kempen en Lessius Mechelen.
financed by The KULeuven ‘School of education’ expertise network, knew four main stages: desk research, development of a shared vision, design of pilots with support and realisation of the pilots with data collection.

During the first year we focused on the first three stages. We gathered information concerning workplace learning, practice, professional development in education, work shadowing, dual learning, coaching, learning networks, co-teaching, partnership teaching etc. in literature and through empirical research (using quantitative and qualitative methods, such as digital questionnaires and interviews), to obtain an accurate picture of the characteristics and conditions required to organise efficient and effective job shadowing experiences for teacher educators.

In order to develop a shared vision, we induced two kinds of support groups. Each participating institution composed an expertise group of school leaders, coordinators and teachers in order to get a clear picture of the expectations and concerns as to job shadowing for teacher educators. A resonance group of representatives from higher and secondary education, policy makers and experts on workplace learning and professional development monitored the project. Their involvement was especially important in view of the future implementation of ‘docentenstages’.

Over 20 teacher educators participated in the pilots in the second year. A pilot consisted of a practice period in which the teacher educator participated in all aspects of teaching and functioning in secondary or primary education. By shadowing a teacher and teaching themselves, they could check out their theories in practice and get inspired to expand and extend their competences. In this individual learning process, each participant could rely on a coach who guided their experiences and reflections through formal (start and final meeting) and informal (consultations in person, by phone, email,...) channels.

Conclusions. This exploratory study revealed some key conditions for a successful jobshadowing experience for teacher educators. In order to obtain optimal learning outcomes all stakeholders underline the importance of starting out of free choice and from 'own' questions. Also active participation in all aspects of teaching and functioning in secondary or primary education and a relationship based on equality are important requirements.

No need to argue that this particular form of jobshadowing implies a significant investment of time from both teacher and teacher educator. Therefore, sufficient time in their task (objectives) needs to be provided.

The study inspired us to develop materials (script, assignments, leaflets, etc.) and to design pathways (kick off meeting, practice, assignments, final meeting and a coaching package).

The gathered experiences strengthened our beliefs in the potential of ‘docentenstages’ both for the professional development of the teacher educators and the optimalisation of teacher education.

Sustained implementation of ‘docentenstages’ in the formal professionalization of teacher educators appears to be a logical outcome of this project. The mere implementation however will not be sufficient. The jobshadowing experience needs to be imbedded in the educational programs and shared with colleagues. Super- and intervision need to be facilitated in order to enhance a continuing professional growth.
**Session number: E2**

**Location:** Room 3A

**Time:** 10.00 – 10.45

**Structured poster sessions**

**Excellence of teachers**

**Chair:** Martin Valcke

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**E2.1 Initiation/response/fellow-up and response to intervention: Combining two models to improve teacher and student performance in Chinese context**

Miao Pei, Shengnan Li and Jianguo Qi, Beijing Normal University

**Abstract**

A common and dominant discourse genre in all content-area classroom settings is the Initiation/Response/Fellow-up (IRF) communication pattern. Another model is the field of education known as Response to Intervention (RTI). RTI formalizes what good teachers in all subject areas have always done: to reflect and assess their practice in order to modify and improve their instructional delivery. Ultimately, the learner benefits from teachers’ self-assessment and the assessment of their students’ performance.

This study combines the classic, standard, and highly useful IRF pattern of communication with the model of RTI for remediation and intervention. It demonstrates the facilitation of professional collaboration that promotes efficacious teachers and more proficient students.

The purpose of this qualitative descriptive study is to analyze IRF communication patterns using RTI in two foreign language immersion classrooms in Mainland China. Two immersion teachers and a total of 102 students participate. The research questions for the study are:

1) What are common second-turn student responses encountered by teachers?
2) What are common strategies used by teachers to elicit extended third-turn follow-up?
3) Does employing RTI in language classes promote extended discourse?

What follows are the answers to the research questions for this study.

The following chart combines student second-turn response with teacher third-turn follow-up strategies (see Table 1), which answers the first two questions.

<table>
<thead>
<tr>
<th>Students’ Second-Turn Responses</th>
<th>Teachers’ Third-Turn Follow-Up Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linguistically incorrect</td>
<td>Repeating exactly and/or summarizing what the students said, with or without pointing out the incorrect response</td>
</tr>
<tr>
<td>Incomplete or inappropriate that may indicate lack of comprehension</td>
<td>Extending what the students said, correct, appropriate, and acceptable</td>
</tr>
<tr>
<td>Utilizing student prior experience/knowledge</td>
<td>Offering explanations or examples</td>
</tr>
<tr>
<td>Providing hints</td>
<td>Asking questions to guide the direction of thinking</td>
</tr>
<tr>
<td>Asking a rhetorical question</td>
<td>Correcting or inappropriately that may indicate lack of comprehension</td>
</tr>
<tr>
<td>Correcting/modeling with corrected language</td>
<td>Incomplete or inappropriate that may indicate lack of comprehension</td>
</tr>
<tr>
<td>Incomplete or inappropriate that may indicate lack of comprehension</td>
<td>Providing hints</td>
</tr>
<tr>
<td>Utilizing student prior experience/knowledge</td>
<td>Asking for synonyms</td>
</tr>
<tr>
<td>Offering explanations or examples</td>
<td>Requiring a response in a complete sentence</td>
</tr>
</tbody>
</table>
After RTI, the teacher/student exchanges in the study are richer and indeed extended discourse. The classes prior to those documented in this paper were teacher-centered with little or no teacher encouragement for peer interaction. Nor were there responses that would qualify as extended discourse. When questioned about the process, the participating teachers both said that the collaboration with the researcher helped them reflect more carefully on their instructional delivery, especially the discoursal strategies in following-up student responses.

The findings from the IRF portion of the study replicate existing research that the third turn in IRF exchanges has the potential to open up classroom discourse in ways that lead to a longer sequence of exchanges and provide more students with more opportunities for interaction (e.g. Gibbons, 2003; Mercer, 2002; Wells, 1996). The findings further demonstrate that by using different strategies the teacher can reinitiate what has just been discussed, providing opportunities for more student output. The extended exchanges increased the amount of time and opportunities for student communication and learning, and in the course of lengthened interaction the students were encouraged to repeat, recast, classify, or extend their expressions.

The findings of the RTI portion of the study also replicate existing research from the special education community (Coleman, Roth, & West, 2009; Hemmeter, Ostrosky, & Fox, 2006). Teachers feel empowered when they work collaboratively to find solutions to enhance student learning.

This study demonstrated that revising the classic pattern of IRF and combining it with RTI affords both teachers and students a number of benefits. Firstly, by formalizing the use of RTI in teaching, it reminds teachers of the importance of being a reflective decision maker with regard to instructional delivery. Secondly, documenting types of teacher third-turn follow-ups for second-turn responses creates a useful repertoire for teachers. Thirdly, combining IRF and RTI benefits the collaboration of educational professionals who together look for instructional solutions, creating a win-win situation for both teachers and students.

| **E2.2 How do teachers think quality?** |
| **Carola Aili and Marie-Louise Österlind, Kristianstad University, Sweden** |

**Abstract**

How do teachers think quality? This question is important since the teaching profession seems to be characterized by constant work intensification (Sarfatti-Larson, 1980). Repeated research show a steady increase in the number of tasks teachers are expected to perform (Apple 1989, Faber 1991, Hargreaves 1994, Day 2000, Grundy & Bonser 2000, Sutton 2007, Day & Gu 2007, Aili & Brante 2007, Chang 2009, Steen-Olsen & Eikseth, 2010). Teachers must therefore constantly prioritize between competing tasks and (to the extent they are pursuing quality of teaching) the question that arises is - how do they construct realtions between tasks that are performed before the lesson and the teaching quality.

In this paper we present an explorative study of how teacher formulate themselves about their daily work tasks in relation to the quality of their teaching. 60 teachers were invited to answer a semi structured web-questionnaire about work tasks they had perform during the day, once a day during two weeks. They were asked to choose two tasks that, from their perspective, had impact on the quality of their teaching in the nearest future.
addition to this they were asked to give each task a name, describe its content and under which circumstances it had been performed, and to specify in which way the task had impact on the teaching nearby. The material includes total 325 respectively 12 received questionnaires.

The analysis focus is on teachers’ meaning-making of what quality is, and the relation between the work before teaching and the outcome of the teaching. A grounded content analysis was performed. The seven tasks identified by the teacher teams in the second questionnaire were analyzed in conjunction with a random sample of answers from the individual questionnaire regarding the same tasks. These tasks are labeled by the teachers name for the work task: Work with individual development plans, Planning of next day’s teaching, Planning of thematic work, Planning a school cinema visit, Production of material and Pupils’ choice.

Some categories for the type of quality impact the teachers report have been construed such as for example “Absolute conditions” for links to a work task to the teaching such as the necessity to have ordered the groceries before a lesson in cooking or ordered a bus for the transport to a school cinema visit. Another example is “Quality in a presentation” for links between high concentration works such as putting pedagogical considerations into a specific content. The way the teachers construct the reasons for tasks being important to quality are discussed in relation to earlier research about teachers’ professional language and to characterization of teacher work.

E2.3 Professional development for teachers of early grades by continuing education programs: Brazil and France cases

Diego Jorge Ferreira, Universidade Federal Fluminense, Brazil

Abstract

French models were very influent on the elaboration of public policies of education design for teachers in Brazil. In this study we aimed to know the similarities and differences between the mentioned countries concerning professional development of teachers of initial grades. We selected some actions involving public institutions and universities. We worked with the perspective of comparison concerning policies, their ways of conception and execution in each country, bearing in mind the correspondent historical contests. In Brazil, we focused on the teachers connected to a cell of Pro-letramento of National Chain of Continuing Education of Teachers in a city around Rio de Janeiro, in an area named as Baixada Fluminense. In France, we focused on teachers of three fast course related to Reading and Writing in French, linked to the Academic Plan for Education. The courses for teachers who are working offered by Higher Education Institutions appear, in both countries, as a way of professional development for teachers. We analyzed the documents related to the mentioned policies. We took 45 interviews with coordinators, teachers of the mentioned courses and teachers who were attending the courses. We related the writing policy and documents with the executed policy through the testimonies of the beneficiaries. We concluded that in Brazil there is the perception of improvements in the professional development of teachers; on the other hand, the French perception was that they are facing precariousness in this process. Nevertheless, especially in Brazil significant progress is demanded. In France the resumption, and even the advances, in the investments in the area seems fundamental, besides being a promise of the François
THURSDAY, JULY 4 10.00 – 10.45

Hollande government.

**E2.4 Self-efficacy, perception of classroom environment, goal orientation: An implication for excellent teachers**
Muhamad Nanang Suprayogi, Binus University, Indonesia

**Abstract**

Problem Statement. Teaching is not just transferring knowledge from teacher to student, if that's the case, then it appears the teacher is the center of science and students are passive, they just only receive a knowledge from teacher. Teaching is more than just transferring knowledge, the teacher must be able to arouse students' learning potential, because actually when they awakened, they will actively seek knowledge, not only learned from their teacher, but also sought from other sources that are now widely available, so they will gain a broader knowledge.

If just transferring, teacher only delivering the knowledge, but less attention to the psychological state of the students, whereas psychological state of the students also determine the success of education. Some of the psychological states of the students are self-efficacy, perception of classroom environment, and goal orientation. Those are should be known by the teacher and should be aroused.

This study was aimed to examine the correlation between self-efficacy and perception of classroom environment with goal orientation. The further study was to gain what are the implementations for the teacher from the self efficacy, perception of classroom environment, and goal orientation to be an excellent teacher.

**Research Questions.**

1. How are the correlation between self-efficacy, perception of classroom environment, and goal orientation?
2. What are the implications for the teacher to be an excellent teacher?
3. What should be done by the teacher to awaken the potential of the student to be able to make them an active student?

**Conceptual Framework.** Every student has their own goal orientation. The goal orientation adopted by student will direct their effort to perform in school activities. Student with a positive goal orientation will direct their efforts to follow the learning activities completely, and will help student to perform optimal learning and reach an achievement. Goal orientation is a specific orientation representing the desire to develop, achieve, or demonstrate competence. This can affect the way students approach learning and show results, and can affect the performance of students in the class. Goal orientation adopted by someone in this situation will affect the mind, affection and attitude of a person (Jagacinski and Duda, 2001). Goal orientation can be divided into 4 types Skaalvik (1997).

1. Task Orientation, means that the focus of attention is on the task rather than on some extrinsic reward.
2. Self-Enhancing Ego Orientation, was the goal of demonstrating superior abilities and outperforming other students.
3. Self-Defeating Ego Orientation, defined as the goal of avoiding looking stupid or being negatively judged by others.
4. Work Avoidance Orientation, represent a form of avoidance motivation. Work avoidance orientation has been associated with the most negative effects of learning (Elliot and Harackiewicz et. al., 2000).

Self-efficacy is the individual’s belief in his ability to organize and perform a desired action to achieve a planned performance (Bandura, 1986). Woolfolk (2004) defined self-efficacy as
an individual's belief in his ability to handle each situation. Bandura (1986) suggested that high self-efficacy will improve achievement and personal well-being in several ways. The good perception of classroom environment will direct students to a comfortable atmosphere to keep learning. Students are assisted in directing the orientation to a positive goal orientation. Together with self-efficacy, students' perception of the classroom environment affects a particular goal orientation (Ames, 1992).

Findings. Result from the study supported the prediction; self-efficacy has a significant correlation with goal orientation, but not for perception of classroom environment. Self-efficacy has a good predictor for goal orientation. The result shows that teacher should pay more attention to the emotional state of students to reinforce their self-efficacy. Teachers also need to hold a kind of training to improve student’s self-efficacy. This will help students to adopt positive goal orientation.

Conclusion. There is a significant relationship between self-efficacy with the first two goals orientation (task orientation and self-enhancing ego orientation). The first two goal orientations is a positive goal orientation that should be adopted by students, and the last two goal orientations (self-defeating ego orientation and work avoidance orientation) is a negative goal orientation and should be avoided. It is good to help students to increase their self efficacy, so they can adopt positive goal orientation. Teacher need to hold a continuous program to arouse and maintains positive self efficacy so they will adopt a positive goal orientation.

E2.5 Leading implementation of revised curriculum for preschool
Laila Niklasson, Mälardalen University, Sweden

Abstract
In 2010 and 2011 preschool managers and preschool teachers were offered extra competence development. The competence development was arranged in cooperation between The National Agency for Education and Regional Development centre at Universities all over Sweden. The aim with the competence development was to support the preschool managers and the preschool teachers as a new school law gave them increased responsibility. This increased responsibility was also emphasised when a revised curriculum for preschool came into force in 2011.

As the aim of competence development not always fulfilled, the research question is, how are the preschool managers and preschool teachers perceiving the competence development?

Results from an enquiry to the participants in the competence development, closed answers, showed that, in general, the competence development had led to increased knowledge about the reform, to better prerequisites for working in accordance with the new steering documents and supported further development in their daily work (planning, process, documentation and evaluation). They also thought that the competence development had fulfilled their expectations.

These positive results are contradicted when answers from open questions are studied. The comments show that participants choose to drop out because of disappointment with the content, that the information about the competence development had led to expectations that was not fulfilled and that some of the universities had not succeeded in creating a relevant learning environment.

A possible interpretation is that either The National Agency of Education was not able to
Promoting professional agency in education and health care work
Anneli Eteläpelto, Katja Vähäsantanen and Päivi Hökkä, University of Jyväskylä, Finland

Abstract
Public-sector organisations such as those in education and health care have witnessed the introduction of a new public management (NPM) culture, with tightened accountability, decreased autonomy, and a higher workload for employees (e.g. Moos 2009; Hökkä & Vähäsantanen 2012). At the same time, they are expected to produce high-quality services, and to develop work practices and organisational operations. Furthermore, professionals need to engage in continuous workplace learning, to cross over the traditional professional boundaries of their work, and to reshape professional identities within changing work practices (e.g. Billett, 2011; Hellave, 2010; Hökkä, 2012). Bringing about sustainable individual and organisational transformation is a challenging task, and it seems that effective methods and tools are needed to enhance multilevel learning and changing. Challenged by this, the research project aims to understand how professional agency is practised, and how it can be promoted through multilevel interventions in education and health care organisations.

In this research project, we see professional agency as exercised when professional subjects and/or communities exert influence, make choices, and take stances on their work and professional identities (e.g. Hodkinson ym., 2008; Vähäsantanen & Eteläpelto, 2011). Thus, the practice of professional agency enables professional subjects and communities to create new, creative work practices, collaborative work strategies, and the transformation of professional identities. Professional agency is practised within the socio-cultural conditions of the workplace. It is closely intertwined with subjects’ backgrounds, including their professional identities, knowledge and competencies, and individual work histories.

This research project aims to i) identify different ways of practising professional agency in a variety of work contexts, including a central hospital and a university; ii) elaborate how professional agency is practised in boundary-crossing conditions, and in the course of structural reforms within work organisations, iii) create a multi-coupling programme for the promotion of professional agency at individual and collective levels, and iv) develop a theoretical model of professional agency within the framework of a subject-centred socio-cultural approach. In this project, the interventions include i) identity coaching, which aims to support identity reshaping and the adoption of new work roles and identity positions at the individual level, through a variety of educational tools and methods, and ii) dialogical and interactive work conference, which aims to create a platform for learning and change at the community and organisational level through participatory and dialogical group work (e.g. Kalliola & Mahlakaarto, 2011).
The research project (2011-2014) is being conducted within an ethnographic framework (Hammersley & Atkinson, 2007). A longitudinal strategy is being used to study the dynamic processes of changes, and the effects of interventions. Various data collection methods are being used (e.g. observations, video-recordings, field notes, interviews, questionnaires, and documents). At a first stage of research project, data is being collected via questionnaires on the opportunities and constraints relating to teachers’ professional agency in educational and health care organisations. Then various identity coaching programmes and dialogical work conferences are being organised in the organisations; data collection mainly via observing and interviewing. In the analysis of the data sets we draw on multi-method approaches, utilising e.g. narrative analysis and discourse analysis. The project shall produce innovative theorising on professional agency at work, in the framework of a subject-centred socio-cultural approach. It will also provide empirical evidence concerning opportunities for enhancing professional agency in education and health care organisations. Based on the findings of the project we shall create a multilevel programme for the promotion of professional agency, aimed at both individual and collective levels. The programme will incorporate different workshops supporting (i) individual agency and identity reshaping, and ii) collective agency and emergence of new, effective work practices and work strategies at community and organisational levels.

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<th>E3.2</th>
<th>Intercultural orientation in early childhood education</th>
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<td></td>
<td>Matthias Lefebvre and Sandra De Vylder, KATHO PHO Tielt, Belgium</td>
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**Abstract**

In this presentation we want to focus on intercultural orientation in early childhood education. Intercultural orientation is recently added as a new topic to the new curriculum Dutch Linguistics and focuses on the interrelation towards other languages and cultures. We will discuss the need of intercultural orientation from early childhood on in order to prepare our future citizens for the multicultural society we live in today. It is our strong belief that cultural and linguistic awareness from a young age is a premise to develop an open attitude towards people with a different cultural background. We will present results from final papers focusing on intercultural orientation and containing didactic material to use in (multilingual) class rooms of nursery or primary schools. Through practice based examples we hope to indicate the necessity of offering young children the required tools in order to acquire future intercultural competences.

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<th>E3.3</th>
<th>A conceptual pedagogy for population-scale behaviour change</th>
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<td>Patrick Tierney, Brock University, Canada</td>
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**Abstract**

Numerous campaigns using social marketing tools (technologies designed to influence the voluntary behaviour of target audiences to improve their social welfare and that of society) have been successfully implemented in recent decades (e.g., anti-smoking, drinking and driving, safe-sex). The Transtheoretical Model (TTM) is a six stage process for behaviour or lifestyle change in individuals which has been proven to be very effective for individuals seeking to modify unhealthy lifestyles and behaviors (e.g., smoking, obesity, unsafe sex). Both social marketing and TTM have demonstrated their utility and effectiveness to operate on a population-scale, rely heavily on education. When TTM and social marketing came into prominence in the mid-1990s, distance education was still primarily based on
printed materials and broadcast television. The rise of the Internet in the last fifteen years has transformed distance education. High degrees of interactivity and customizability have produced an every-increasing global reach. This paper presents pedagogy for implementing population scale behavioural change using techniques and technologies from social marketing, TTM, and distance education.

Transtheoretical Model. The Transtheoretical Model (TTM) (Prochaska, Norcross, & DiClemente, 1994) describes process, based on six successive stages through which an individual must pass through on the way to achieving a healthy lifestyle. The stages are: pre-contemplation, contemplation, preparation, action, maintenance and termination. Each stage includes a set of cumulative processes or activities that people use to progress through the stages. Individuals cannot progress to the next stage until the requisite tasks associated with their present stage are completed. Processes that are not appropriate to the individual’s current stage will have little or no effect. These processes provide important guides for intervention programs, as they indicate what people need to apply, or be engaged in, to move from stage to stage (Author, 2011). They have been categorized as either cognitive or behavioural in nature, requiring education strategies to be used in their implementation. Individuals in the first stage of the TTM, pre-contemplation, are often unaware of their unhealthy behaviours. Social marketing may prove useful in developing this awareness.

Social Marketing. Andreasen (1994) defines social marketing (SM) as “the adaptation of commercial marketing technologies to programs designed to influence the voluntary behaviour of target audiences to improve their social welfare and that of the society of which they are a part” (p.110). A key difference between commercial and social marketing is that SM seeks to benefit target consumers and/or society as a whole, not the marketer (p. 111). Social marketing campaigns must consider four variables: product (e.g., personal health, altruistic, or social betterment causes); promotion (i.e., the communication persuasion strategy and tactics that will make the product familiar, acceptable, and even desirable to the target audience); place (i.e., motivated persons should know where the product can be obtained; and price (i.e., monetary, opportunity, energy, and psychological costs) (Kotler & Zaltman, 1971, pp. 7–9). There have been a number of successful population scale, social marketing efforts, almost exclusively in the public health domain (e.g., anti-smoking, drinking and driving, use of seat belts, the practice of safe sex, and environmental awareness). The application of SM to fields beyond health and the environment fields, such as attitudes towards education and learning, seems not to have been attempted on a large scale.

Distance Education. Education is a major component of both TTM and social marketing. Prochaska (2004), one of the co-developers of the Transtheoretical Model, has recommended the use of computer-based and distance-mode education for behaviour change programs centered on TTM. Author (2011) identified several DE technologies that are suitable for TTM-based lifestyle change support, which included streaming video instructional assets, blogs, forums, and targeted social media. DE could be useful in “getting the message out”. Andreason (2002) lauds the use of distance education in population-scale social marketing campaigns, particularly by the World Bank. Commonplace websites such as YouTube, Facebook, Twitter, and Wikipedia offer the means for providing a learning experience without the appearance of “being in school.”
A Conceptual Pedagogical Model for Population-Scale Behavior Change. Smith and Ragan (2005, p. 262) describe attitudes as “choosing to do something.” Their instructional strategy for attitude change presents three fundamental sources for the change: persuasive messages; modeling, often in the form of role models; and, dissonance, the anxiety that results from simultaneously holding contradictory or otherwise incompatible attitudes. Smith and Ragan further state that attitude learning has three components: cognitive – knowing how to do something; affective – knowing why and choosing to do it; and behaviour – the opportunity to practice the desired behaviour (Smith and Ragan, 2005, p. 262 cited in Author, 2011, p. 47). Their approach to attitude learning dovetails well with TTM’s cognitive and behavioural processes. Pedagogies that effectively facilitate learning should meet three criteria: learnability, functionality and usability (Driscoll, 2005, p. 147). The key to learnability rests in presenting information in high quality instructional materials with information not otherwise available to the learner. The introduction of Web 2.0 technologies in the early 2000s has made high functionality and usability commonplace. Target audiences that are typically under 30 years are considered digital natives and thus are very comfortable with most technologies (Prensky, 2001).

Importance to Education. The pedagogy presented here is the first to integrate social marketing, the Transtheoretical Model and distance education. Each of these approaches has been successful in its own domain: social marketing campaigns for smoking, drinking and driving, and environmental issues; lifestyle modification programs using the Transtheoretical Model have helped millions to counter obesity or quit smoking; distance education is rapidly becoming mainstream in secondary and tertiary education. This pedagogy will permit a coordinated approach for issues as diverse as the gender imbalance in post-secondary education, convincing populations to move away from carbon-based energy sources, or adopting healthful lifestyles.

E3.4 Pathways to learning: A comparison of language programs for adult immigrants in Canada and Finland
Marianne Seppä, University of Helsinki, Finland and Kim Henrie, Mohawk College, Canada

Abstract
Language training plays a very important role in the integration process of immigrants by improving their language skills and making them job-ready. Canada is often seen as a traditional immigration country that other nations, “often look to for advice in policies related to immigration and multiculturalism,” (Kymlicka, 2008 in Biles et al. 2011, p. 6) and, in particular, the Canadian Immigrant Integration Program (CIIP) (ACCC, 2012) has been influential for many European nations.

Finland, like many other European countries, is experiencing increasing immigration from various source countries. Immigrant issues are widely discussed in Finland and throughout Europe. In Finland, the new Integration Act (FINLEX®, n.d.) was enacted in September 2011 and the National Board of Education approved the Core Curriculum (Finnish National Board of Education, 2012) for Adult Immigrant Integration Training in February 2012.

This paper discusses government-sponsored language training for adult immigrants in Canada and adult immigrants and migrants in Finland. The primary focus is to analyze different instructional frameworks and learning pathways as well as to present a
comparative exploration of local practices, teaching methods, and assessment techniques in both countries.

The aim of this paper is to compare the Canadian and Finnish systems of language training and discuss issues related to integration policies. Our research will, therefore, address the following research questions: 1.) What are the current learning pathways available to adult immigrants in Canada and Finland?, 2.) What kind of languages assessment tools and techniques are available in Canada and Finland?, 3.) How do teaching practices vary between Canada and Finland?

The data for this paper will consist of documents describing the theoretical frameworks, instructional resources, and statistics in addition to classroom observations in Canada and Finland. Comparison of policies and practices in both countries will create a discussion about the best practices identified and the gaps which still need to be addressed in language instruction for adult immigrants in Canada and Finland.

### Session number: E4  
**Location:** Room 4A  
**Time:** 10.00 – 10.45

#### Structured poster sessions  
**Chair:** Bram De Wever

#### Computer supported learning

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<tr>
<th>E4.1</th>
<th>A digital learning environment to support multilingual education in primary schools</th>
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<td>Evelien Van Laere and Johan van Braak, Ghent University, Belgium</td>
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**Abstract**

Problem statement. There is a strong growth in the diversity of languages pupils bring into the classroom in Flemish education. On the one hand, due to immigration waves a part of the pupils often speaks another language than Dutch, in their home as well as in their direct surroundings (Ceuleers, 2008; Van den Branden & Verhelst, 2009). On the other hand, a lot of pupils acquire a basic knowledge in English, for example through their contact with television, internet and computer games (e.g. Kuppens, 2010). However, this linguistic diversity is seldomly addressed as didactic capital and often even excluded from the learning process because it is considered as a barrier to learning Dutch. Nevertheless, national as well as international attention is given to the value of multilingualism (e.g. Council of the European Union, 2008, 21 November; Smet, 2011, 22 July; Standaert, 2008). Especially in the present globalizing world, educational practitioners are challenged to work with the diversity of languages we are faced with.

Information and Communication Technology (ICT) holds a valuable opportunity to work on multilingualism in the classroom (e.g. Pederson, 1986). However, how digital learning environments can support the learning of languages and knowledge acquisition in these languages remains unclear (Liu, Moore, Graham, & Lee, 2003). Besides, ICT-integration stays rather low in Flemish education (Tondeur, van Braak, & Valcke, 2007; van Braak et al., 2010; van Braak, Tondeur, & Valcke, 2004). More useful learning materials are necessary for teachers to give a full place to ICT in their classroom practice (van Braak et al., 2010).

In the light of the 21st century skills, and more specifically the skills that focus on digital literacy, learning through problem solving and positively dealing with diversity (Voogt & Pareja Roblin, 2010), we propose the development of E-Validiv, a multilingual digital learning environment. This is part of the larger Validiv-project, which aims at the
valorization of the linguistic diversity in today’s schools through the development of different tools.

Conceptual framework. The idea of plurilingualism in schools, namely making all pupils’ languages visible and valuable (Agirdag, 2009), is based on the assumption of a positive relationship between pupils’ first and second language. This is supported by the linguistic interdependence hypothesis (Cummins, 1979; 1991; 2000), which suggests that proficiency in the first language can support and facilitate learning in the second language through transfer of knowledge and skills (Bauer & Gort, 2012; Cook, 2001; Cummins, 1979, 1991; Leseman, 2000; Verhoeven, 1994). The mastery of more than one language also leads to a knowledge-surplus, which holds several cognitive benefits, such as increased attentional control, working memory and metalinguistic awareness (Adesope, Lavin, Thompson, & Ungerleider, 2010). Besides, giving pupils the chance to use their native language can give them a greater sense of belonging at school and make them feel more confident about themselves (Agirdag, 2011).

Digital learning environments come to the foreground as powerful tools to support pupils in their acquisition of complex knowledge and skills (Lajoie & Azevedo, 2006). For example in the domain of multilingual learning, they can help non-native speakers to master the content in a language other than their native language through additional language support. Indeed, the power of digital learning environments lies in the opportunity to empower and at the same time structure all pupils’ learning (Freeman, 2012; Freeman & Crawford, 2009), for example through the use of different kinds of scaffolds (Vygotsky, 1978), such as dual-medium learning (Mayer, 2000), pedagogical agents (Clarebout, Elen, Johnson, & Shaw, 2002) and immediate feedback (Hattie, 2009).

In our research, we will develop, implement and evaluate a multilingual digital learning environment, called E-Validiv. Content about ‘wereldoriëntatie’ will be offered in Dutch and another language (English, French, Italian, Polish, Spanish or Turkish). E-Validiv will be used in 30 schools by 4th and 5th grade pupils during 1,5 school years. Before and after the implementation, respectively a pretest and a posttest will be held, with measures of pupils’ personal background, linguistic repertoire, social-emotional well-being and educational achievement.

Expected findings. The central aim of this research is to study how 4th and 5th grade pupils acquire knowledge in a multilingual digital learning environment. We expect findings on three different domains:

1) We expect a positive effect of the multilingual offer on the domain-specific knowledge acquisition of 4th and 5th grade pupils. Specifically, we assume that the achievement gap between non-native and native speakers of Dutch will decrease through the use of E-Validiv (e.g. Freeman, 2012).

2) We expect that the use of scaffolds will help all pupils to direct their learning and to come to deep knowledge acquisition (e.g. Devolder, van Braak, & Tondeur, 2012).

3) We expect that the social-emotional well-being of non-native speakers of Dutch will increase through the use of E-Validiv (e.g. Agirdag, 2011).

Conclusion. With the development of E-Validiv we want to give a valuable answer to the question how teachers can create classrooms in which all children’s languages are valued, utilized and further developed (Bauer & Gort, 2012). Hence, we want to contribute to the scientific knowledge about how ICT can be implemented to valorize the linguistic diversity.
in primary education. Likewise, we hope teachers will reflect on and make use of the wealth of languages present in their classroom while at the same time working on pupils’ 21st century skills.

| E4.2 | **Scaffolding self-regulated learning in a computer based learning environment – Its application in 6th grade of primary education**  
Anneline Devolder, Johan van Braak and Jo Tondeur, Ghent University, Belgium |
|---|---|

**Abstract**

CBLE’s are becoming ubiquitous and extensively used in education (Azevedo, 2005). In general, a CBLE refers to a learning environment wherein students can actively construct their knowledge. CBLE’s comprise systemic features like open-ended in structure, non-linear, multiple and non-sequential information representations. These features present new possibilities for education like direct visualization, more tangibility and manipulation of complex topics (e.g. Land & Hannafin, 2000). In order to learn effectively in CBLE’s, learners will need to learn in a self-regulated manner (Winters, Greene, & Costich, 2008). Students are self-regulated to the degree that they are metacognitively, motivationally, and behaviorally active participants in their own learning process (Zimmerman, 1989).

Unfortunately, many students do not possess these necessary self-regulated learning skills (e.g. Azevedo & Cromley, 2004). Therefore, scaffolds need to be integrated in current CBLE’s since research has shown that these can give the necessary support (Shapiro, 2008). Scaffolding is being described as “...the provision of technology-mediated support to learners as they engage in a specific learning task” (Sharma, & Hannafin, 2007, p. 29).

Research shows that when learners fail to make use of the scaffolds provided in a CBLE, learner achievement might be jeopardized (Winters, Greene, & Costich, 2008). Therefore, in this study, it is examined how learners make use of the scaffolds integrated in the CBLE watweetjeoverevolutie.be. Are these scaffolds used as intended? Based on literature (Devolder, van Braak, & Tondeur, 2012), following scaffolds are focused upon: a note maker with scheduling tools, guidelines, a planner to structure learning goals and to evaluate the achievement of these goals (tick-off box), and a timer.

As central topic of the CBLE, evolution theory was chosen. Although evolution theory is an empirically supported theory and although it is being acknowledged as the fundament of our life sciences, it often has to compete against ignorance (Alters & Alters, 2001; Braeckman, 2007). From an educational point of view, it appears that Flemish 6th year primary school pupils often experience difficulty to achieve the learning goals of topics related to evolution theory because of the abstractness related to this subject (Janssen et al., 2007). So there seems to be a societal as well as an educational relevance to spreading knowledge on evolution theory.

In this study, 126 learners of sixth year of primary education in Flanders participated. During five consecutive weeks, learners worked in the environment watweetjeoverevolutie.be. In the first week, learners had the opportunity to practice in the environment. From the second week, they learned independently. Every activity a learner performed in the environment was logged. This means that every time a learner used a scaffold, the frequency and the duration was saved. Table 1 shows a relative high use of the scaffolds. With regard to the types of the scaffolds, the planner to structure learning goals was used less in comparison with the other scaffolds.
### Abstract

Introduction. Previous research suggests that pre-service history teachers often hold predominantly traditional views of history education (McDiarmid, 1994; Virta, 2002). Characteristic of such a view is the belief that learning in history will occur by presenting students with valued stories about the past (Leinhardt, Stainton, & Virji, 1994). However, over the past decade, cognitive research has indicated that historical inquiry, demanding that students inspect source material and construct their own narratives, can promote a better recall of the subject matter (Wiley & Voss, 1996, 1999), as well as a better understanding of the nature and procedures of the discipline (VanSledright & Limón, 2006). Consequently, the history teacher’s main task is to promote historical reasoning, which Van Drie and Van Boxtel (2008) define as organizing information about the past to describe, explain and/or compare historical phenomena. As such, historical reasoning always involves one or more of the following components: asking historical questions, analyzing sources, situation phenomena in context, forming arguments, using substantive concepts and/or using meta-concepts (Van Drie & Van Boxtel, 2008).

Unfortunately, little is known about how future history teachers can be prepared for this task. What is certain, is that pre-service history teachers must first understand the interpretative nature of history and be competent in historical reasoning before they can learn how to teach this to others (Martin & Monte-Sano, 2008). In relation to this, certain studies point out the potential of technology to enhance historical reasoning, either by supporting students with scaffolds (Saye & Brush, 2002) or scripts (Van Drie, Van Boxtel, & Van der Linden, 2006) in what is called computer-supported collaborative inquiry. Of late, the use of scripts has become fairly popular among educational scientists (Dillenbourg & Jermann, 2007). Put shortly, scripts are more compelling than traditional scaffolds, and guide students by specifying, sequencing and distributing roles and activities (Kollar, Fischer, & Slotta, 2007). Following research showing that argument building is one of the hardest parts of historical reasoning (Spoehr & Spoehr, 1994; Van Drie et al., 2006), the present study aims to examine how a script can improve pre-service history teachers’ historical reasoning in general and argument building in particular. Furthermore, the study aims to examine pre-service history teachers’ experiences of a computer-supported collaborative inquiry task in relation to their own beliefs and practices regarding history teaching.

Method. Near the end of 2012, the study will be carried out with 52 pre-service history teachers in the second year of a three-year teacher education program leading to a bachelor degree of history teacher in the first two grades of secondary education. During a four-hour intervention, participants will be assigned to dyads and work in a computer-supported collaborative inquiry environment to solve a historical problem statement on the English peasants’ revolt of 1381. Using a quasi-experimental design, dyads will be divided over two conditions. During the first phase, all participants will study the available source materials individually. Next, participants will join their respective dyads and be asked to collaborate in writing down an answer to the problem. Whereas the control group will only...
receive a list of guidelines regarding argumentation in history, the experimental condition will receive these guidelines in the form of roles, requiring them to actively monitor the construction of their answer.

Participants’ learning gains will be measured with a pre- and posttest focusing on domain-specific and domain-general (argumentation) knowledge. Also, participants’ interaction during the second phase of the task will be taped and subsequently transcribed, allowing an analysis focusing on their participation and the content of their interaction (the main categories for this analysis being historical reasoning, coordination and off-task behavior). Finally, the quality of the arguments proposed in the writing task will be examined.

Shortly after the intervention, separate focus groups will be held with participants from the control and experimental condition, in which the interviewer will use a semi-structured interview to explore their experiences regarding the computer-supported collaborative inquiry task, as well as how these experiences fit in with their own beliefs and practices of history teaching.

Results. As the study will be conducted near the end of 2012, results will be available by the time of the conference. Based on the available literature, it is expected that the experimental condition will show more historical reasoning when interacting during the task and will formulate better arguments in their written answer. Furthermore, it seems likely that the task will conflict with pre-service history teachers’ existing beliefs and practices of teaching history.

E4.4 Is it important to use technology in pre-service teachers’ geometry courses?
Gerrit Stols and Sonja Van Putten, University of Pretoria, South Africa

Abstract

Problem statement. Researchers voiced uncertainty about the benefits of school technology use (Brown-L'Bahy, 2005). In fact, Myhre, Popejoy and Carney (2006, p. 1002) pointed out that there is “considerable uncertainty within the educational community regarding the value of technology in teaching and learning”. There are however researchers who believe that technology, if correctly used, can enhance teaching and learning. A study by Usun (2007) suggests that if technology is used for higher-order learning, it can result in increased mathematical achievement. Guven (2012) explains that the power of the dynamic software does not only stem from the possibility of constructing, it also allows interactive explorations by dragging points, vertices and objects.

This study investigated the geometric cognitive growth of pre-service mathematics teachers in terms of the Van Hiele levels in a technology-enriched environment, as opposed to that of students in a learning environment without any technological enhancements.

Theoretical framework. The Van Hiele theory has made a significant impact on the world in terms of geometry education, particularly after it became known internationally what its impact had been on Russian mathematics education. Following in the footsteps of Piaget, Pierre and Dina Van Hiele identified five hierarchical, sequential and discrete levels of geometric development that are dependent on a learner’s experience. According to their model, learners have to master a level to be able move to a higher level. The levels, as described by Mason (2009, pp. 4-5) are as follows: Level 1: Visualisation, Level 2 Analysis, Level 3: Abstraction, Level 4: Deduction, and Level 5: Rigor.

Research design. In order to investigate this, a quasi-experimental non-equivalent comparison group design was used. Similar course content was used for both the control
and experimental groups. The students worked through a series of geometry activities and problems. The difference between the groups was that dynamic geometry software was integrated into the teaching of the experimental group. The Cognitive Development and Achievement in Secondary School Geometry (CDASSG) Van Hiele Geometry Test was used to determine all the students’ level of geometric thinking before and after the course.

Results and discussion. The results of the study suggest that the pre-service mathematics teachers did not have a sound understanding of more advanced Euclidian geometry. The majority of students did not reach Van Hiele levels 4 or 5 in both groups and only about half reached Van Hiele level 3. It came as a surprise that not all pre-service students scored full marks on Van Hiele levels 1, 2 and 3 in both the control and experimental groups – not even after the course had been presented. There was a definite descending trend from level 1 through to level 4, as predicted by the literature. This was, however, not the case with the level 5 questions. The students performed slightly better on the level 5 questions compared to the level 4 questions. An independent samples t-test was conducted to compare the improvement in scores of the control and the experimental groups for each Van Hiele level. The results of the independent t-test show that the only statistically significant difference in the pre- and post-test scores of the control group was on Van Hiele levels 3 and 5 at p < .05. In the case of the experimental group (technology-enriched) there was a significant difference in the pre- and post-test scores on Van Hiele levels 1, 2, 3 and 4 at p < .05.

Conclusion. The results suggest that the technology enriched environment helped to improve the conceptual geometric growth of students on Van Hiele levels 1, 2 and 4 which is about geometric visualisation, recognition of properties of geometric figures, and the construction of proofs. The results also show that the use of dynamic geometry software, as opposed to a traditional learning environment of the control group, may have a negative impact on the geometric development on Van Hiele levels 3 and 5. These levels are about informal argumentation and the formal aspects of deduction. Dynamic geometry software cannot improve Van Hiele level 4 reasoning directly because deductive reasoning is about the understanding of axioms and the construction of proofs. The results of this study therefore contradict some of the findings of other studies, as mentioned in the problem statement, which suggest that the use of technology always supports the development of higher-order thinking.

Structured poster sessions

Teaching for 21st century skills

E5.1 ICT-competencies for teacher trainers in the 21st century

Nancy Verliefde and Luk Vanlanduyt, ENW AUGent, Belgium

Abstract

Problem statement. Nowadays, it is important that teachers are familiar with ICT because ICT can be very helpful in the learning process. But which competencies and attitudes do teachers need to be successful in using learning technologies? And which competencies should we expect from teacher trainers? If teacher-trainers don’t demonstrate themselves how to use ICT in teaching and don’t help their student teachers to reflect upon this, how can we then hope that the integration of ICT in the classroom can be achieved.
The main question of the project is: Which ICT-competencies should teacher trainers have themselves in order to deliver competent teachers for the 21 Century who are able to integrate ICT effectively in their classroom.

The questions we answer in this project are:

- In which way the pre-service teacher training curriculum offers in itself a guaranty that teachers will use ICT in a “correct” way?
- Which are the gaps in the curricula concerning the ICT-competencies of starting teachers?
- How can we formulate a competence development system that is strong enough but also can encourage teacher trainers who are not so ICT-minded?
- What are the ICT-competencies and related attitudes we should expect from each teacher trainer?
- Is ICT competence a personal or a team-related matter?
- What are available frameworks and how can we use the frameworks of UNESCO, GESCI, Kennisnet (Netherlands), (TPACK)-model and existing frameworks of our country (“ICT-eindtermen”) – to define an attractive scheme of competencies?
- Which strategies for sustainable implementation can be developed and are successful?

The project “Professional development of ICT-competencies for teacher trainers” is running in fifteen teacher training institutes. A workgroup of fifteen experts supported the project group in building an acceptable competency framework for the near future.

At this moment, we have some findings.

1) It is very risky to use checklists for measuring ICT-competencies that individual teacher trainers should have.
2) We’ve developed a new competency model for teacher trainers in which they are called upon their role as members of the teacher team, to contribute to the ICT-objectives of the teacher training program. Every teacher trainer has his responsibility to take in stimulating student teachers to use ICT in a good way. The competency framework categorizes ICT competencies in teaching ICT content (and teaching how to teach it), in using ICT (educational-pedagogical) in the context of the class, school and community and in using ICT for professional development.
3) We’ve developed on this concept some workshops to create a way for sustainable implementation. We also identified the following conditions to make this successful: strong leadership, vision and implementation methodology of the directors of teachers institutes.

Conclusion. In this poster, we summarize the first findings of the project and present the developed competency scheme with indicators. Besides this we highlight also the concrete implementation methodologies that several teacher institutes are using to develop in their teacher trainers stronger and team oriented ICT-competencies...

E5.2 Direct measures of ICT competence in primary education: Development and validation of an ICT competence scale
Koen Aesaert, Ruben Vanderlinde, Ghent University, Belgium; Daniël Van Nijlen, KU Leuven, Belgium and Johan van Braak, Ghent University, Belgium

Abstract
Objectives and purposes. The purpose of this study is to introduce the development of a
valid standardized direct measure of ICT competence for pupils at the end of primary education. First, special attention is given to the development of a computer based simulation test that was used to collect the data. Second, IRT analysis (Hambleton, Swaminathan, & Rogers, 1991) is used to examine and revise item and instrument characteristics, and to establish claims about the instrument’s reliability and validity.

Problem statement and theoretical background. Within the present context of the twenty-first century skills movement it is widely accepted that people and more specific children need to possess a set of ICT-competences to cope with the economic, social and educational challenges of the information society. Consequently, schools need to develop educational programs in which pupils can develop these competences (Kozma, 2008). In this regard, Katz (2007) argues that valid and reliable assessment instruments are needed to know if instructional programs that focus on the development of ICT and information competences are paying off. Meelissen (2008) states that the interest in the research field for the measurement of ICT-competences is limited. Moreover, most of these measures are directed towards students’ self-efficacy of their ICT competences. A limitation of the use of such an indirect measure is that students’ self-reported results are not always a representation of their actual performance level (Hakkarainen et al., 2000).

Method. Using the Flex framework, PHP and MYSQL software, a closed ICT test was created. The scenario driven and simulation based items were developed by an expert panel using the principles of Evidence Based Design (Mislevy, Steinberg & Almond, 2003). Further, IRT analysis was conducted including item fit statistics, differential item functioning, item category structure, person-item map and dimensionality. The IRT-model used was the two-parameter logistic model (2PLM).

Data sources and evidence. The Flemish ICT attainment targets for primary education were the point of reference for the development of the ICT test. The test measures the pupils’ proficiency in 1) retrieving, processing and saving digital information that is appropriate for them; and 2) using ICT to communicate in a safe and responsible way. The test contains four assignments that are made out of two types of items: items that measure technological, procedural skills and items that measure information processing skills by using ICT. Item usability and authenticity was reviewed by an expert panel and a field test was conducted in October 2011. The final assessment has been administered to a representative pupil sample (N=600) in the final grade of 57 Flemish elementary schools in June 2012. The data of the test were controlled for fit to the 2PLM-model (Hambleton et al., 1991).

Scientific and scholarly significance. The development and validation of an instrument to measure ICT-competences in a direct way contributes to the mapping process of pupils true ICT-competences. Moreover, an instrument will be available to cross-check the validity of surveys that measure ICT-competences in an indirect way. The results will add to the literature of computer-based assessment of 21st century skills. As such, the results are of particular importance for both researchers and policy makers in the field of technology integration and assessment.
The development of social competence in primary school: In search of the ingredients of a powerful learning environment
Joanna Papieska, KU Leuven, Belgium and Joanna Madalińska-Michalak, University of Lodz, Poland

Abstract
The research project is embedded in the work of the Research Centre for Experiential Education. The study is experiential in its approach. This means that the researcher makes a constant effort to understand the process of experiencing in children and teachers, in other words to reconstruct their experience. The aim of the research is to identify the active ingredients of learning environments in order to develop social competence in children.

In this research, social competence is treated in the holistic way. It “refers to a differentiated awareness of one’s own feelings, motives and behaviour and to the ability to enter into peoples’ feelings, perceptions, thoughts and intentions (role taking capacity). It comprises the capacity to intuitively understand interactions, to predict and to anticipate behaviour, taking into account the social and cultural context and personal characteristics such as age, and personal traits. In addition to this, social competence requires a broad repertoire of ways to interact with others and the capacity to sense what the most adequate approach is in a certain situation” (Laevers, 2007).

The definition is in line with the approach inspired by the most recent paradigm on competencies – in which learning is not viewed as adding to a child’s mind a list of isolated skills and specific information concerning the world of social phenomena, but as activating and changing children’s schemes that represent social reality. In other words, creating a powerful learning environment will aim at changing a ‘program’ instead of adding new ‘files’ to pupil’s cognitive repertoire (Laevers, Heylen, 2008).

The study addresses three categories of variables that cover the quality of education: the context, the process and the effect. At the level of context, the attention is paid to establishing an environment that fosters the development of social competence. The main focus is here on the pattern of teacher intervention called teacher style. At the level of process, two indicators that are crucial in the search for quality is taken into account: emotional well-being and involvement of the child. Children social competence is considered as a desired effect.

The research will bring the answer to the overall research question: What are the active ingredients of learning environment that contribute to the development of social competence? This question leads to formulate the specific research questions:

1) What is the impact of the ‘House Full of Emotions’ on the development of social competence in primary school aged children?

2) What is the relation between the way the ‘House Full of Emotions’ is implemented by teachers and its impact on the development of social competence?

3) What is the relation between a way the intervention is implemented and children’s involvement?

4) Is there a relation between involvement and the results on a pre- and post-test of social competence?

5) Does an implementation of the ‘House Full of Emotions’ have an impact on the classroom climate?
The study is conducted as an intervention research with the pre-test and post-test experimental design. The designed program will consist of five subsequent parts:

1) Drawing children’s profiles.
2) Pre-test measurement of the level of social competence in the intervention and control groups.
3) Teachers training.
4) Conducting five 2-hour sessions per class with the ‘House Full of Emotions’ in the intervention group.
   - Observation guided by the Process Orientated Analysis of Learning Environments.
   - Measurement of group climate and involvement of children with the Leuven Involvement Scale for Pupils.
   - Assessment of teacher style with the Adult Style Observation Schedule.
   - Self-evaluation of well-being and involvement by each child after session.
   - Evaluation of the sessions by teachers (interviews and questionnaires).
5) Post-test measurement of the level of social competence in the intervention and control groups.

The program will be implemented in a sample comprising of 5 classes of second-grade pupils (eight-year-olds) and 5 classes of third-grade pupils (nine-year-olds). It means that the intervention group will consist of 10 classes. Moreover, the pre-test and the post-test will be conducted in the control group comprising of the same number of classes of each grade. The classes will be selected among schools in Lodz and in its vicinity (Poland). 5 two-hour sessions will take place in each class of the intervention group.

The study has a particular importance since it will investigate the role of involvement as a condition for deep-level-learning. Moreover, it will provide an opportunity to develop social competence with a tool in which a holistic approach of competence is applied and as such contribute to a deeper understanding of the concept of schema.

E5.4  

Nurturing gifted students with the 21st century skills in a primary school in Hong Kong  
Beatrice Chiu, Diocesan Boys’ School Primary Division, China

Abstract  
This study is a two-year case study that explores the issues of nurturing gifted students with the 21st century skills in a primary school in Hong Kong. The presentation will report the findings of the first year.

The school involved in this study is a boy school of high reputation in Hong Kong. It provides 150 places each year for Grade one and its admission is extremely competitive up to 20 to 30 candidates for one place. Consequently each successful applicant is assumed to be talented or gifted in one area or another. Even when they are found not up to the standard as that of the majority, they are expected to have support from outside resources, like private tutoring. In Grade 5 and 6, students encounter the second bottleneck—getting a place in the accelerated class called X-class to avoid labeling. Though the school puts great efforts on developing children’s growth on ‘otherness’ apart from their academic performances, parents show more concern for the grades and marks their children get in their report cards. Teachers, on the other hand, always take students’ high academic
achievement for granted, and most of them do not think a special training to cater to the needs of gifted students is needed. Research suggests that the problems of the underachievement of gifted students could be addressed by grouping them with like-ability or like-performing peers in terms of academic effects and affective effects, and providing a nurturing environment for them (Mingus & Grassl, 1999; Reis & McCoach, 2000; Rogers, 2007). It is then important for teachers to be aware of the qualities contributing to students’ talent and giftedness and provide a better teaching and learning environment to enhance those hidden and unique qualities in full, including the emotional maturity (e.g. perseverance) and the 21st century skills (e.g. critical thinking and problem solving, self-directedness, communication and collaboration).

However, little research has been conducted in the domain of gifted education in Hong Kong, especially in a context of primary schools. Therefore, this case study intends to address the following research questions:

1) To what extent do we understand the qualities of gifted students in terms of emotional maturity and the 21st century skills?
2) What constitutes a nurturing environment for further development of those gifted students?
3) How do we narrow the gap between the awareness of teachers and the needs of our gifted students?

In this study, four gifted students in Grade 5 were selected for this study, who are studying in English, Chinese and Maths X-Class. They would attend a gifted programme (9 one-hour workshops, 3 workshops in each term) to complete the following tasks:

1) Complete the tasks provided by the workshops in search of suspects.
2) Show strategies they use in studying, problems solving, social interaction and collaboration.
3) Analyse the attribution to their success and failure.
4) Express their mottos.
5) Introduce people they respect and explain the reasons.

After the first year, the research findings will be analyzed and workshops will be reviewed and revised for the second round to address students’ needs.

Data were collected through observation, in-depth interviews and journal writing to address the research questions. These four students were closely observed in the workshops. In-depth interviews were conducted with them before, during and after the workshops. Three subject teachers (one for each subject), their parents and peers were also interviewed. In addition, students were required to keep journals while attending the workshops.

Initial data analysis suggests that parents and teachers’ awareness of their children or students’ being above-average facilitates the emotional maturity of the gifted, especially perseverance, to get difficulties solved responsibly and tasks done completely. It is also significant to help students understand themselves so as to achieve the quality and skills of leadership, self-directedness and social interaction. The mindset of nurturing children to be high-score-achievers in different domains should be considered as important as nurturing them to be great souls to provide a more flexible environment for the gifted. The Gifted Education Department of the Hong Kong SAR Government does not have enough experts in helping schools to design school-based gifted programmes. Instead, it only provides schools
THURSDAY, JULY 4 10.00 – 10.45

with lots of well-set and government-directed lesson plans, materials and tools. Intensive teacher training for all teachers is necessary and needed to understand the needs of gifted students with different abilities and to help provide a better teaching and learning environment in the school for their intellectual growth as well as affective growth.

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<tr>
<td>Structured poster sessions</td>
<td>Chair: Tammy Schellens</td>
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**Teaching specific subjects: Science and physical education**

**E6.1 Primary school science: Implementation of domain-general strategies into teaching didactics**
Kristof Van de Keere, Peter J. N. Dejonckheere, Isabel Tallir and Stephanie Vervaet, University College of Katho, Belgium

**Abstract**
In the present study we present a didactic method to help children aged 11 and 12 learn science in such a way as to enable a dynamic interaction between domain general strategies and the development of conceptual knowledge, whilst each type of scientific process has been considered (forming of hypotheses, experimenting and evaluating). We have used the didactics to stimulate metacognitive awareness and implemented them in a two-month programme around eight different content domains (alternative energy, electrical circuitry, electromagnetism, the human body, slopes, the pendulum, friction, and sinking and floating). Results showed that children developed significant understanding with regard to the process and strategy domain of scientific thinking, but that this effect was dependent on the type of teacher involved (pre-service versus in-service teacher). In addition, we found that 12 year-olds showed some aspects of self-regulated learning in hands-on experimenting after they took part in the programme. At the level of attitudes, relative to controls, a significant drop in enthusiasm for science was found while both children of 11 years and 12 years old viewed science as less difficult after the end of the programme. Findings were interpreted in the light of situated interest versus longer term personal interest in science and technology.

**E6.2 Teaching chlor-alkali industry in grade 12 classrooms in South Africa**
Detley Nkuna and Fhatuwani Mundalamo, Tshwane University of Technology, South Africa

**Abstract**
Introduction. The Department of Education in South Africa introduced the new curriculum known as National Curriculum Statement (NCS). It was first implemented in grade 10 in 2006 and was then implemented in grade 11 in 2007. In 2008 it was implemented in grade 12. The chemistry content in this curriculum has been divided into three knowledge areas, namely; chemical change, chemical systems and matter & materials. This study focused on evaluating how teachers teach the topic chlor-alkali industry. This topic was not covered in the syllabus contained in the syllabus before the NCS.
Most of the teachers in one of the districts of education in South Africa known as Mopani do not have a University first year course in chemistry in their qualifications. Majority of
these teachers have only secondary education diploma (SED) whereas others only have the secondary teachers’ diploma (STD) and teaching chlor-alkali industry, a new topic may be of challenge to them.

This study investigates how the topic chlor-alkali industry is taught in Mopani district. According to Shulman (1987) teachers’ beliefs and theories influence their perceptions, actions and plans. Teachers take decisions regarding the teaching strategy or approach that they may use in teaching a particular content (Shulman, 1987).

Research questions. The following questions were addressed in this study:
1) What teaching strategies do teachers use in teaching chlor-alkali industry?
2) What is their understanding of this new chemistry topic, chlor-alkali industry?

Theoretical framework. Pedagogical content knowledge (PCK) models were used to frame this study. Shulman (1987) identified seven categories of the teacher knowledge base, namely; content knowledge, knowledge of the learners and their characteristics, general pedagogical knowledge, curriculum knowledge, pedagogical content knowledge and knowledge of educational ends, purposes, values, philosophical and historical grounds.

Geddis and Wood (1997) also identified seven categories of teacher knowledge which are similar to those of Shulman (1987). PCK is seen as the knowledge that plays a role in transforming subject matter knowledge into ways that will be more accessible to the learners. Different authors (e.g, Verskoop & de Vos, 1998; Loughran, Mullhal & Berry, 2004; Rollnick, Bennett, Rhemtula, Dharsey & Ndlovu, 2008) extended the notion of PCK.

Rollnick et al.’s (2008) model was used in the analysis of results. The model consists of the domains of teacher knowledge and manifestation of teacher knowledge. Domains of teacher knowledge are as follows: knowledge of subject matter, knowledge of students, general pedagogical knowledge and knowledge of context. Manifestations of teacher knowledge consists of the following: Representations, curricular saliency, assessment, topic specific instructional strategies. The teaching model of Shulman (1987) was used in designing the questions for interviews and also for the interpretation of the results.

Findings. Two teachers out of three teachers could not answer the questions asked by the learners. For the teacher number 1, the learner wanted to be clarified with regard to whether mercury acted as a cathode or anode in the mercury cell because it seemed as if there was contradiction between what he was saying and what was in the textbook. The response from the teacher was not clear, his statements were contradicting each other. For the second teacher, when a similar question was asked, the teacher struggled to give learners a proper answer.

All the teachers were using similar teaching approaches, namely, the lecture method. One teacher included the question and answer method. They used these teaching approaches because they are much familiar to them. They were taught these approaches in their teacher training programs. They were never exposed to other approaches like context based approach.

Conclusion. Learners seemed to have lot of misconceptions about electrolysis and redox reactions. But teachers failed to correct that. The teachers also made some errors in their presentations which brought confusion to the learners. Though the topic itself is embedded in a particular context, the approach used was a traditional one due some constraints which are beyond the teachers’ control. They taught according to the work schedule provided by the Department of Basic Education since they are expected to finish the syllabus within a
specify time. Using other teaching approaches may derail them. The PCK of teachers who participated in this study is very low and learners failed to understand chlor-alkali industry.

**E6.3 Teachers’ self-efficacy in internship situations in physical education classes**
Roraima Alves Costa Filho and Roberto Iauchite, State University of Sao Paulo, Brazil

**Abstract**
Findings on the field of teacher education have showed the mediational role of internship on real teaching practice situations (Anderson, Walker & Ralph, 2009; Gurvich & Metzler, 2009; Lin, Gorrel & Taylor, 2002). In these situations, it is possible creating links between different knowledge, and it is an opportunity to reflect about own abilities, personal beliefs and values related to teaching. Among personal beliefs, self-efficacy assumes an important role, once it influences choices, goals, persistence and motivation to achievement. Researches about self-efficacy beliefs during the internship have shown an increase of the belief when there are teaching activities, involvement with school environment and also by means of the evaluations received from teachers. Self-efficacy is considered a future oriented belief in a specific domain and it’s established by four sources: mastery experiences, vicarious experiences, verbal persuasion and physiological and affective states (Bandura, 1997). This exploratory study aimed to measure teacher efficacy belief and its sources as well as identifying the circumstances in which the internship is recognized by student-teacher as a way to promote learning and confidence to teach Physical Education classes. Participated in this study, eleven Physical Education student-teacher (55% women, mean age 22 years old) from a state university in Sao Paulo, Brazil. Data were collected from: a) a questionnaire of characterization of the participants; b) Physical Education Teacher Self-Efficacy Scale (α = .87); c) Teacher Self-Efficacy Scale Sources (α = .89); d) Documental analyses from student teaching portfolios. The level of teacher self-efficacy was moderate (M = 6.01) in a scale of 9 points. The most mentioned sources were verbal persuasion (M = 5.0) and mastery experiences (M = 4.6) in a scale of 6 points. The more relevant circumstances experienced during the internship were: teaching in real situation, classroom management, talk to teachers in the school, and change experiences with colleagues during the student teaching classes at university. These results are in agreement with literature, and create an opportunity to think about the contribution of social cognitive theory, in particular, self-efficacy, as a reference to reflect on the practices of teacher education in Physical Education field. Moreover, it can help in the development of innovative teaching strategies in order to spread and strengthen the internship as a bridge between theoretical and practical background in order to relate and support increased self-efficacy beliefs of student-teachers and teachers in service.

**E6.4 Evaluation of didactical approach of fair play and integrity amongst (future) youth sport instructors**
Kristine De Martelaer, Joke De Bouw, Katrien Struyven, Vrije Universiteit Brussels, Belgium and Leen Haerens, Ghent University, Belgium

**Abstract**
The aim of our study was to test effectiveness and usefulness of two didactical learning environments, namely inductive and deductive, on the teaching of ethics in sports among (future) youth sports instructors. During the deductive lesson participants (subgroup 1)
received the theory approach first, followed by a number of specific practical exercises on ethical aspects of fair play and integrity. The participants of subgroup 2 were stimulated during an inductive lesson on the same topics, to discover the theoretical framework themselves by means of concrete situations and examples. At the end of the lesson the participants (n=502) filled in questionnaires which probed for the quality experienced by the participants and their knowledge on the theme of fair play and integrity. The results showed that the quality of the lesson with the deductive learning environment scored significantly higher on the three subscales: “encouragement to problem solving” (F=57,278, p<0.001), “organisation/ structure of the lesson” (F=27,961, p<0.001) and “practical applicability” (F=56,221, p<0.001). The average score for the entire group at the knowledge pre-test (taken before the lesson) was 3,3 to 10 (SD=1,3). Only 10% scored higher than 5 to 10 on this pre-test, which implies a very low level of basic knowledge on the subject of fair play and integrity. The scores of the knowledge post-test were significantly higher (F=124.486, p<0.001) in the deductive learning environment (5,9/10) compared with the inductive learning environment (4,2/10). As the research was tried out in a real educational context, several advices can be given for the teaching of sport ethical topics on fair play and integrity.
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**Emergence of the ISATT community (Anniversary book strand theme)**

Michael Kompf, Brock University, Canada; Frances O’Connell Rust, University of Pennsylvania, United States; Chris Clark, Arizona State University, United States; Christopher Day, University of Nottingham, United Kingdom; Freema Elbaz-Luwisch, University of Haifa, Israel; Marcy Kysilka, University of Central Florida, United States; Pamela Denicolo, University of Surrey, United Kingdom; Maureen Pope, United Kingdom; Joost Lowyck, KU Leuven, Belgium and Rob Halkes, Tilburg University, The Netherlands

**Abstract**

This Discussion Room session revolves around the social narrative history of ISATT over its illustrious 30th years of existence. Long-time members Michael Kompf (Canada) and Frances Rust (USA) will begin the conversation by focusing attention on the fine-grained details of the international organization’s founding and the transitioning research interests of ISATT members over time and across place. Joining Frances Rust and Michael Kompf in the discussion that unfurls will be some of ISATT’s long-standing members: Joost Lowyck (Belgium), Rob Halkes (The Netherlands), Chris Clark (USA), Christopher Day (UK), Freema Elbaz-Luwisch (Israel), Marcy Kysilka (USA), Pam Denicolo (UK) and Maureen Pope (UK), among others.

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**Body, ethos and emotion: Bringing forgotten dimensions of teacher professionalism back to the research forum**

Geert Kelchtermans, KU Leuven, Belgium; RachelForgasz, Monash University, Australia; Sharon McDonough, University of Ballarat, Australia and Wendy Moran, Australian Catholic University, Australia

**Abstract**

Policy, practice and research in education have lately been focusing primarily on issues of effectiveness and efficiency in teaching and learning. Teachers’ professionalism is more and more exclusively defined by and conceived in technical, instrumental or functionalist terms. “Evidence based practice”, “examples of good practice”, “teacher-proof teaching materials”... etc., all these concepts reflect a narrow and utilitarian view of teaching and learning. Although it can’t be denied that a concern for effective teaching and learning approaches is justified (for example from a social justice perspective), the instrumentalist approach of teaching presents a very reductionist view on educational processes, on teaching, teacher professionalism and identity. Conceiving of teacher professionalism as a combination of expertise and personal commitment, this session seeks to set the stage for a discussion on the dimensions of teaching that have been downplayed or forgotten: the embodied nature of teaching, the moral or ethical drive in teachers’ actions, and the inevitable emotionality in their professional commitment. The focus of the discussion will be on how to...
conceptualize the dimensions as well as how to operationalize research interest in a methodologically rigorous way. This way the four panelists will publicly demonstrate the discussions and concerns they have been sharing among themselves, while at the same time widening that dialogue by inviting the audience in the debate.

After a brief introduction of the discussion goals and the working procedure, each of the four panelists will present two or three claims on these forgotten dimensions (max. 5 min per presenter) in teaching. The presenters use different theoretical lenses in their empirical work and as such their introductions will lay out a diversity of perspectives and methodological practices to address the ethical, emotional and embodied dimensions of teaching: narrative-biographical perspective, phenomenology, approaches inspired by the ethics of caring or by embodied reflective practices. As well as critically reflecting on the neglect of the dimensions, all the presenters will address two questions:

- How can we appropriately conceptualize the embodied, ethical and emotional dimension in teaching?
- How can we address these dimensions through research in relevant, valid and yet methodologically rigorous ways?

This round of presentation will set the stage for an engaging debate with the audience. In order to provide sufficient structure in the discussion, single page handouts will be provided to the audience with a summary of the claims, the key definitions and theoretical positions taken by the presenters. Depending on the size of the audience, the group will break up for the discussion in two subgroups, around two of the presenters. In each group one of the presenters will take on the role of facilitator of the discussion. In a final plenary “wrap up”, each group will report on the elaboration or modification of the original claims of the presenters as it resulted from the discussion.

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How to train your professor: Tips for flight according to students
Christine Arnold, University of Toronto, Canada

Abstract

Programs and services that enhance and support student learning and success have become an increasingly important component of most postsecondary institutions. Despite increases in structures to support student success in recent decades, there is little understanding of the various ways in which senior administrators, faculty, student services/affairs staff and students organize and support teaching and learning. This multi-institutional study met with each of these stakeholder groups across thirteen institutions (colleges and universities) and discussed their roles, procedures and objectives for supporting student success. Curricular and co-curricular initiatives were discussed as well as opportunities for growth. Stakeholders reflected on student expectations of their learning experiences, services and programs on campus and how student needs were being met. Most importantly, students themselves voiced strengths and weaknesses in current pedagogical approaches used by faculty and staff as well as institutional procedures and policies.

The study consisted of 90-minute focus groups with senior administrators, faculty, student services/affairs staff and students. The following research questions framed the investigation: How are teaching and learning techniques perceived by students? What expectations do students hold for teaching inside and outside the classroom? What organizational structures, procedures and
policies contribute to and/or inhibit student success?
Findings reveal that students recognize institutional efforts both inside and outside the classroom. Their top tips for flight include:
1) Learning among 800 undergraduate students is challenging. Large lectures require breakout seminars, tutorials or labs during which concepts can be discussed and applied.
2) Technology is not a panacea. Technology is effective when it supports learning outcomes, eases student workload and content delivery.
3) Sitting and listening are basic skills. Students are eager to move beyond the basics and engage in active and problem-based learning.
4) Remember our names and our aims. Use experiential learning opportunities aligned with student interests in the workforce/community.
5) Make it meaningful. Demonstrate expertise by bringing research findings into classroom discussions; offer a variety of examples; and set consistent policies and guidelines.
In this session, participants will be asked to reflect and write about an ordinary class session. How do they prepare for inclusive learning and engage students in an everyday class session? How would they envision teaching this same class session if there was no limit to their imagination? Participants will compare their “dream class” to the student tips outlined in the study. Similarities and differences will be identified and shared. The session will conclude with participants writing down one concrete step they can take to make their ordinary class look more like their dream class.

SYMPOSIA

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<td>Interpreting, examining and problematizing excellence in early childhood teaching in Aotearoa/New Zealand</td>
<td>Discussant: Frances O’Connell Rust</td>
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Abstract
On the international stage, Te Whāriki (Ministry of Education [MOE], 1996) was an acclaimed early curriculum statement entrant. It was commended for its play-based, progressive and non-prescriptive bases, its affirmation of the bicultural nature of NZ, its inclusion of attention to infants and toddlers and its emphasis on learning processes and orientations as outcomes. It was designed so that each early childhood setting could weave its own programme, reflecting the social and cultural context in which each is embedded. Constructs of learning dispositions and working theories are the key indicative outcomes in Te Whāriki. In operationalizing assessment related to this curriculum Carr (2001) has developed a form of narrative recording for formative purposes: learning stories. This inherent flexibility means individual teachers and centres shoulder the responsibility to interpret and implement the curriculum. In such situations there is the potential for this weaving to occur in strong and weak ways.

Fluctuating political winds have constrained the sector’s ability to deliver on Te Whāriki. It has often been a case of two steps forward, one step backwards as the sector attempts to improve children’s experiences. For example, while a ten year strategic plan set a goal of 100% qualified teachers by
2012, recent policy reversals reduced these targets, with consequent implications for considerations of excellent teaching. Further, funding to assist newly-qualified teachers to embed and develop knowledge during their two-year teacher registration period from centres with over 80% qualified staff has been withdrawn. This two-year period is vital to contextualising professional knowledge in a coherent manner and encouraging ongoing learning and reflection in order to provide the evidence sought of excellent teaching practices, including assessment.

With such an open-ended curriculum, and the team environment in which teaching takes place, it is therefore clear that in order to strive for excellence in teaching practice, teachers need a strong foundation of professional knowledge to draw on collaboratively and policy that recognises the importance of professional education and learning. This symposium addresses these matters from three angles:

1) Interpreting the professional registration criteria that newly-qualified teachers work towards demonstrating for two years following teacher education and the support and mentoring that facilitates related excellent teaching practice;
2) Examining the complexities of involving families in assessment of infants and toddlers, where education and care needs intersect with desirable curriculum outcomes and a centre philosophy and may create tension;
3) Ways in which excellent teaching might be problematized with regard to the construct of “intentional teaching”, when much of what occurs in early childhood teaching and learning environments is spontaneous and not pre-planned.

**F4.1 Interpreting excellence in early childhood teaching in Aotearoa/New Zealand**

Barbara Watson, University of Auckland, New Zealand

**Abstract**

A New Zealand (NZ) Teachers Council programme of research led to the introduction of the Registered Teacher Criteria (RTC) (New Zealand Teachers Council, 2010) as the standards against which teachers’ practice must be evidenced. This evidence-based approach to promoting excellent quality practice is used elsewhere in the world. However, in NZ the criteria are not differentiated by whether the teacher teaches at early childhood, primary or secondary level.

The resulting non-prescriptive nature of the RTCs means that teachers must define and interpret them within their particular context and within the team environment of the early childhood centre. The Teachers Council views the RTCs as serving as a hurdle, a compass and a beacon. This means that over a teacher’s career they serve a variety of purposes. Firstly, they are a minimum standard to be attained in order to reach full registration status, then later, they are a direction for future development and as aspirational targets for experienced teachers. They may, therefore, may be interpreted differently by different teachers and/or at different times.

Further, since 2007, the New Zealand Teachers Council has been engaged in a programme of research and evaluation targeted at improving teacher effectiveness across all sectors of education. In spite of having the world’s most favourable levels of resourcing for induction and mentoring programmes supporting teachers entering the profession, there has been concern over the disparate implementation of these programmes and the resulting benefit for teachers. In the non-compulsory early childhood sector the levels of support available for some early childhood centres was withdrawn in 2011. Further, those centres still eligible for government funding towards induction and mentoring programmes receive significantly
less than schools in the compulsory sector. Nevertheless, all early childhood settings are still expected to provide a comprehensive programme of induction and mentoring for new teachers.

Moreover, formal induction and mentoring programmes are relatively new to the education and care context. This means that few experienced teachers in this part of the sector have had the time or opportunity to build a strong history of mentoring. Further, there are very few mentor training programmes available through which interested teachers can develop mentoring skills. These factors may present barriers to the quality of mentoring available to new teachers in education and care centres.

Professional leaders and mentors play a key role in defining the expectations for learning and teaching within a context and the disposition of a new teacher to pursue the goal of teaching excellence is significantly influenced by the culture in which they are practicing. It is the expectation of the NZ Teachers Council that all teachers will participate in professional learning communities that deliberately inquire into practice with a view to improved outcomes for children. In addition to the challenge of resourcing then, another key barrier to teachers’ ability to define and develop common understandings of excellent teaching in a particular context is a lack of time for professional discussion. This is particularly true in the education and care sector where teachers work overlapping shifts, do not share non-contact time and work alongside unqualified colleagues.

Mentoring is assumed to result in increased teacher effectiveness and better outcomes for children but there is little research available to demonstrate that this is the case. Not only is “excellent teaching” open to interpretation but also “improved outcomes for children”. This presentation will discuss policy and professional issues pertaining to the interpretation of excellence in early childhood. It will focus particularly on the enablers and barriers to effective mentoring of new teachers and the problem of interpreting what effective teaching looks like in education and care contexts.

F4.2 Striving for excellence within infant and toddler settings: Teachers partnering with families to assess learning
Maria Cooper, University of Auckland, New Zealand

Abstract
How might teachers strive for excellence in the context of infant and toddler education and care? One way is through effective relationships with families to assess children’s learning. New Zealand’s early childhood curriculum Te Whāriki affirms reciprocal and learning-focused partnerships between teachers and families as essential to enhancing infants, toddlers and young children’s learning (Ministry of Education, 1996). Yet, research recognises that such partnerships are challenging to establish, as they require time and energy from both parties as well as mutual understanding of their purpose. Further, there is little known research literature concerning the nature of teachers’ relationships with families, when assessing infants’ and toddlers’ learning in full-day settings. This paper argues that understanding excellence in teacher-family partnerships in assessment is far from straightforward, as these partnerships are likely to be influenced by factors specific to the context in which they develop. This paper reports on one aspect of an interpretive, qualitative, case study, which investigated how early childhood teachers, in one full-day setting, understood the notion of involving families when assessing infants’ and toddlers’
approaches to learning. Data were gathered from semi-structured interviews with each of the five teachers, a range of centre documentation, and researcher field notes. The thematic analysis highlighted that teachers’ relationships with families in assessment were characterised by one-way communication and summative documentation about children’s development and learning. Carr’s (2002) sociocultural notions for assessment were used to interpret the data: competence, community and continuity. Findings illuminated certain factors that had a bearing on the nature of relationships with families. These factors included teachers’ views about teaching and learning, the nature of non-contact time in the setting, and teachers’ primary care-giving responsibilities to each child and their family. Together, these factors appeared to constrain teachers’ ability to develop and sustain Te Whāriki’s reciprocal learning-focused partnerships with families, when assessing infants’ and toddlers’ learning. This paper concludes that understanding excellence, with regard to teacher-family partnerships in assessment, is complex. As such, it requires careful consideration for potential influences and constraints on the development of such partnerships. Implications for teaching practice, teacher education and research are proposed and discussed.

F4.3 **Problematizing excellence in early childhood teaching in Aotearoa/New Zealand**

Susan Batchelar, University of Auckland, New Zealand

*Abstract*

The concept of excellence in teaching in the context of early childhood education in Aotearoa/New Zealand is inherently problematic for two main reasons. First, there is no one clearly agreed understanding of what constitutes “teaching” in such a context. Second, there is also a lack of a clearly agreed understanding of how “excellence” can be evidenced in this context.

Te Whāriki is informed by multiple theories and philosophies. These include: developmental theories of learning and development, in which teachers were perceived as guides or facilitators of children’s learning; sociocultural theories, in which learning is considered to occur within the context of collaborative exploration; and the Māori (indigenous New Zealander) concept of ako, in which the roles of learner and teacher are considered to be interchangeable. As a consequence of these multiple influences, and its deliberately non-prescriptive nature, Te Whāriki is open to interpretation by teachers, centre owners and managers. This in turn creates the possibility of multiple constructions of the role and responsibilities of the teacher.

Te Whāriki expects that early childhood teachers will implement a play-based curriculum that includes both pre-planned and spontaneous events. One pedagogical strategy that is not mentioned in Te Whāriki, but that features in international research in early childhood education, is intentional teaching. Intentional teaching is a phrase frequently associated with a developmental understanding of children’s learning, and it may convey an image of didactic teaching that is not consistent with the New Zealand approach to early childhood education. However, New Zealand literature indicates that this is a concept with which early childhood teachers there are beginning to engage. This may reflect the international debate about the place of teaching concepts to children in early childhood education centres, and the tension that has been identified between a social pedagogy, with its emphasis on developing children’s positive attitude towards learning, and a pre-primary, or school-focused, approach which emphasises knowledge acquisition related to subject
This paper will present some initial findings from a doctoral study in progress. This study explores the way in which intentional teaching is understood by teachers, and whether intentional teaching is an appropriate construct for a play-based approach to early childhood education underpinned by Te Whāriki. One aim of this study is to theorise ways intentional teaching might be enacted within spontaneous interactions, events and experiences. Drawing on this preliminary thinking, the paper will present for discussion and debate a developing theoretical perspective on what might constitute excellence in teaching that is grounded in teachers' understandings and practice.
communities are also required to address societal and educational problems such as issues of violence, drug abuse, abuse of women and children, poverty, and the ramifications of HIV/AIDS. To do this effectively, teachers need to develop support practices that demonstrate an ethic of care and commitment towards developing children as whole persons (Noddings, 1984, 2003, 2005). The aim of the comprehensive study was to identify their existing support practices and customise interventions to suit the contextual and professional development needs of the teachers. The data generated through individual and focus group interviews, participatory and non-participatory observation and information from documentation used in the schools were transformed by means of the constant comparative method. We first developed ethnographic casebooks for each school and then compared the contexts and findings across cases (Baszanger & Dodier, 2004).

The themes that emerged from these comparisons include caring and support as a way of life; caring as building and nurturing of relationships; and caring and support practices are diverse. Although the narratives of the participants speak to “practices of hope”, a central theme emerged as a counter-narrative namely that balancing the multiple roles and complex demands of caring and support make them vulnerable and often jeopardise their own wellness. In this paper we argue that when teachers are over-extended, then caring and support can become a burden and a barrier to quality teaching and learning. Teachers therefore also need caring and support of professionals in education, psychology, health and social services to fulfil the care needs of the learners. Meaningful support of teachers is not incidental, but should be structured, co-ordinated, continuous and tailored to the specific needs of the teachers and school communities.

F5.2 Inclusive classroom practices in secondary schools
Annet De Vroey, Katrien Roelandts, KH Leuven, Belgium and Katja Petry, KU Leuven, Belgium

Abstract
As a part of the qualitative ‘Inclusive Secondary Education’ Research Project (De Vroey & Roelandts, 2011), classroom practice in inclusive settings was studied across twelve schools, 25 different classrooms and 15 subject matters, representing all age groups and streams of secondary schools in Flanders (Belgium).

The aim of the study was to construct a map of classroom activities, relations and instructions in secondary schools that can be perceived as representative for classroom practice in a heterogeneous group of students from 12-18 years, including students with a disability. 55 lesson observations were written down in a framework, based on the Classroom Assessment Scale (La Paro, Pianta & Stuhlman, 2002) and research on inclusive classroom practice (Murray & Pianta, 2007; McDougall et al., 2004), each lesson being simultaneously followed by two trained observers. This framework supported the observers in selecting and classifying any activity, event or interaction at first sight, while describing and illustrating in detail what was happening in the classroom. At the same time, it served as a hypothesis for a final map of inclusive classroom practice. Consequently, the observations were coded in order to capture the main characteristics of classroom practice in groups where students with a disability are included.

The results led to two principal conclusions: in inclusive classrooms, teacher practice and interactions are largely similar to practice in typical secondary classrooms; teacher practice
starts from good management skills, arrangements and instruction quality, mostly without adding special techniques, materials, or co-teacher support. However, looking deeper into the actions and interactions in the classroom, the student-teacher relationship shows a high degree of sensitivity, peer interactions are cooperative, and teachers and classmates respond to the need for self-determination of the student with a disability. Teachers and peers seem to be well aware of the needs of students with a disability, and are able to deal with these special needs in a subtle, balanced way. Teachers show a simultaneous attention and responsiveness for group and individual needs. These observations confirm the theory that inclusive classroom practice mirrors high quality education. Finally, an adapted framework based on these findings was designed as an instrument for student teacher practice. A small group of ten student teachers was asked to make use of the framework as a reflection instrument during a teacher practice semester. Their reflections confirmed a first use of the instrument as a framework for professional development on teacher practice in heterogeneous classrooms.

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<th>F5.3</th>
<th>Professionalisation as the key characteristic of a whole school approach to socio-emotional guidance</th>
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<td>Karen Jacobs and Elke Struyf, University of Antwerp, Belgium</td>
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**Abstract**

With a shift in education from the transition of knowledge to the facilitation of the fullest development of each student, the social and emotional guidance of students has moved from the margin to the mainstream of education. With limited resources and many competing demands, however, implementing this social and emotional guidance at school is not always that simple. The aim of this study, therefore, was to investigate what facilitates teachers to integrate social and emotional guidance into the curriculum and their teaching practice. By addressing this matter, this study made a first step in the development of a comprehensive model on integrated socio-emotional guidance, which has up until now been seen as lacking in the theory and literature on student guidance. The results of the study show that, except for communication with parents, all variables as hypothesised based on the literature, had a direct or indirect effect on teachers’ social and emotional guidance of students in the classroom. For the teachers’ characteristic task perception, which was operationalised as narrow and broad task perception, we found both a direct effect and an indirect effect through professionalisation. As expected, teachers who have a broad task perception, and who thus consider teaching to be more than the transition of knowledge or the facilitation of intellectual skills, are more likely to guide students in their social and emotional development and to professionalise with respect to socio-emotional guidance. For narrow task perception, or the perception that social and emotional guidance is best performed by a specialist because it diverts attention from (academically) educating students, we found the opposite effect. Our results thus confirm that teachers’ attitudes towards guidance and their implicit theories or perceptions have a significant impact on their approach in the classroom (Trilliva & Poulou, 2006). More specifically, our results confirm that teachers who consider themselves as caregivers are more likely to be involved in guidance (Lam & Hui, 2010) and that unfavourable cognitions or beliefs go hand in hand with less guidance interactions (Koomen, et al., 2006). For the school characteristics we expected that structures and procedures, communication with
parents and professionalisation would have a direct effect on guidance by the teacher, and that a caring climate, a clear and shared vision, support from the school principal and communication and collaboration between teachers would have both a direct effect and indirect effect through professionalisation. The results of our study confirm a direct effect for professionalisation, a clear and shared vision and structures and procedures on guidance by the teacher. Only an indirect effect could be found for climate, principal support and communication between teachers, and for communication with parents no significant effect was found. The largest effect on guidance by the teacher is exerted by professionalisation. Our study thus confirms that the preparation, training and development of teachers is a crucial factor for teachers’ participation in the social and emotional guidance of students (Male, 2011). This is not surprising given that several authors and organisations in recent years have stressed the importance of professional development for all workers in all occupational sectors, including the teaching profession (see e.g. Evers, et al., 2011).

F5.4 The added value of guidance counselors in mainstream education
Elke Struyf, Stefanie Adriaensens, University of Antwerp, Belgium and Karine Verschueren, KU Leuven, Belgium

Abstract
Due to the international trend towards more inclusive education and comprehensive guidance, the responsibilities of the guidance counselor in schools have changed. The traditional more narrow set of tasks in which the remedial teaching of students with special educational needs is emphasized, has given way to a more comprehensive set of tasks regarding to students and their parents, their teaching colleagues and external care services (Agaliotis & Kalyva, 2010). The current study investigates which tasks the guidance counselors perform in schools, using hierarchical cluster analyses (Ward’s method) and its relation with classroom teachers’ task perception and guiding competences (two important constructs which are required to establish a more integrated guidance counseling, see also paper 3) and overall satisfaction with the guidance policy. Respondents were 2035 classroom teachers (M per school = 12.88, SD = 6.36) and 207 guidance counselors from 166 primary schools and 1859 classroom teachers (M per school = 24.46, SD = 15.55) and 109 guidance counselors from 82 secondary schools. The hierarchical cluster analyses revealed six clusters. The most prominent profile in our participating schools is the profile which reflects moderately high scores on the set of tasks regarding student counseling and cooperation with parents, teachers and external partners (‘first- and second-line guidance counseling’). The profile whereby the guidance counselor acts mainly as second-line counselor – he/she mostly works with teachers, parents and external services and less with students – is the least present. However, the distribution of profiles differed between primary and secondary schools. Almost 60% of the primary schools fitted the profiles ‘strongly present guidance counseling’ and ‘first- and second-line guidance counseling’ with high or moderately high scores on the four sets of tasks, respectively. On the contrary, more than 50% of the secondary schools fitted the profiles ‘externally oriented guidance counseling’ (with emphasis on cooperation with parents and external partners and less on school internal support), and ‘relatively absent guidance counseling’ (with low scores on the four sets of tasks relative to the mean). Furthermore, results generally showed that when
teachers work in school with a good or strongly present guidance counseling, they rate their guidance competence with regard to cooperation with colleagues as higher. No relation was found with teachers’ task perception. Teachers and guidance counselors who work in schools with a good or strongly present guidance counseling towards the four partners were most satisfied with the guidance policy in their school; teachers and guidance counselors who work in schools with guidance counseling oriented towards parents and external partners or guidance counseling that is relatively absent were the least satisfied.

**PAPER PRESENTATIONS**

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<td>F6.1 <strong>Principals’ sense-making of a new teacher evaluation policy</strong></td>
<td>Eva Vekeman and Geert Devos, Ghent University, Belgium</td>
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**Abstract**

Problem statement and clear research questions. Research on the implementation of teacher evaluation is scarce and the way school leaders approach and implement teacher evaluation policies has gone largely ignored (Coldren & Spillane, 2007). Scholars in different disciplines have investigated the role of implementers’ sense-making during the implementation process (a.o. Spillane, 1998, 2000). While most of this work shows how school leaders strongly shape what teachers understand about policy ideas, we know little about the way school leaders’ sense-making is influenced by teacher reactions and how they respond to those reactions. For that purpose, a study was set up in which we interviewed 14 principals and 45 teachers in Flemish secondary schools (Belgium). The main research questions were: How do teachers react to the new teacher evaluation system set up in their school? How do school principals respond to those reactions and does this shape the way principals make sense of the new teacher evaluation policy?

**Conceptual framework.** The responsibility for policy implementation in schools rests mainly with the principal. He/she is held accountable for creating conditions to facilitate policy implementation. However, policy-makers are often not aware of local actors’ concerns or interpretations of the new policy as they intend it. As a result, the intended policy is often very different from the policy in use. Recent research explained this difference as a result of the construction by local actors of a personal system of knowledge, experiences, skills, attitudes, etc. (Spillane, Reiser, & Reimer, 2002). One set of these sense-making studies specifically shows how principals’ responses to external policy demands are influenced by their own beliefs, values, expertise, prior knowledge (Anagnostopoulos & Rutledge, 2007; Spillane et al., 2002) and collective beliefs and knowledge of their school community (Louis, Febey, & Schroeder, 2005). As managers, including school leaders, operate within a social structure consisting of multiple stakeholders with each of them having their own opinions, we believe principals’ sense-making is also shaped by the reactions of teachers within the
school. Moreover, while interpreting a new governmental policy, discrepancies between teachers' opinions and those of the school principal may occur. Since discrepancy-reduction in this context is a complex and understudied process in which the principal needs to take into account opinions from different stakeholders (Tsui & Ashford, 1994), it is interesting to investigate how principals' sense-making process is influenced by discrepancies in his/her interpretation of the policy and those of teachers' in the school.

Findings and conclusion. In order to understand how school principals' make sense of a new and complex teacher evaluation policy we opted for a qualitative research methodology. In the 14 participating schools, data were collected through semi-structured interviews with 14 principals and 45 teachers who had already a performance appraisal conversation with their principal. While the results of the cross-case analysis showed how different teachers react to the new teacher evaluation policy, results of the within-case analysis indicated how different both principals made sense of the new teacher evaluation policy. The sense-making process of both principals seemed to be influenced by teacher reactions, although not in the same way. While principal A mentioned mainly negative teacher reactions as a factor in his sense-making process, principal B referred, besides teacher reactions, also to other factors (e.g., past experiences, her vision, agreements within the school network).

Moreover, large differences have been found in the way both principals tried to reduce discrepancies between principals' and teachers' interpretation of the policy. The principal in school B responded to negative reactions of teachers by explaining the reasons for her actions to the teachers. This does not mean she was not sensitive to teachers' opinions but she was not afraid to alienate teachers who disagreed. This is in line with what Tsui and Ashford (1994) see as an effectiveness-oriented strategy of discrepancy reduction in which managers have a strong belief in what is the best for the organisation and are willing to act contrary to others' demands or expectations. The latter seemed to be difficult for the principal in school A. It looked like he easily complied to teachers' negative reactions. Managers, as principal A, who appear to modify their behavior frequently and appear to be “too eager to please” are likely to be viewed as weak or as lacking a strong vision (Hargreaves & Goodson, 2006; Staw & Ross, 1980). While both teacher reactions and principals' way of discrepancy-reduction thus seem to be important, further research should take into account also characteristics of teachers in the school, the relationship between teachers and principals, ... to fully understand the complex sense-making and policy implementation process.

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<th>F6.2</th>
<th>Committed teachers through school leader feedback</th>
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<td>Melissa Tuytens and Geert Devos, Ghent University, Belgium</td>
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**Abstract**

Teacher evaluation has been implemented in many countries as a mean to improve teaching. However, there is a general criticism toward teacher evaluation which states that it does not offer useful feedback to contribute to teachers' improvement. In this regard, there is a need to study teachers' reactions to teacher evaluation empirically. Often the affective reactions (e.g., organizational commitment) of teachers are forgotten, although these affective reactions are expected to have an impact on teachers' willingness to change or improve their practice. This study puts forward a path model which identifies important supervisor characteristics which influence teachers' justice perceptions and their organizational commitment. It offers an optimistic view on teacher evaluation potential.
Theoretical framework. As an independent variable, we put forward the supervisor feedback environment. This concept was developed by Steelman, Levy and Snell (2004). They define the feedback environment as “the contextual aspects of day-to-day supervisor-subordinate and coworker-coworker feedback” (p.166). In this study, we focus on the supervisor-subordinate aspect because the supervisor is the main source of feedback in education. In this study, we select the following sub facets of the supervisor feedback environment: source credibility, source availability, feedback delivery and promotes feedback seeking as supervisor characteristics. A second independent variable which we integrate is a teacher evaluation system characteristic. In a previous study (Authors, in press), we investigated several teacher evaluation system characteristics and their influence on justice perceptions of the teacher evaluation system. Our results indicated that the amount of teacher participation during teacher evaluation significantly influenced perceived procedural justice. Hence, we integrate teacher participation in our model. As affective teacher outcomes, we put forward justice perceptions on the one hand and organizational commitment on the other hand. The fairness of teacher evaluation procedures is important for the reactions of teachers to the result of this procedure, namely the feedback they receive from their supervisor. If these feedback reactions are positive, teachers will be more inclined to change their professional behavior based on the feedback (Ilgen Fisher & Taylor, 1979). In this regard, many authors (e.g. Erdogan, 2002) describe procedural justice as an important variable that influences teacher feedback reactions. Procedural justice relates to the fairness of the evaluation procedure itself. Next to procedural justice, distributive justice is often described (Erdogan, 2002). Distributive justice relates more to the fairness of the outcomes of a decision process. In our model, we integrate both procedural and distributive justice. A second affective teacher outcome is teachers’ organizational commitment. Organizational commitment is a critical factor in the functioning and success of an organization. It may contribute to the dedication of an employee to attain organizational goals (Dee, Henkin & Singleton, 2006). Justice perceptions are expected to have an influence on organizational commitment (Erdogan, 2002). Methods. For this study, data were used from 332 teachers in 32 secondary schools in Flanders (Belgium) through a survey. We also used data collected from 32 school leaders through semi-structured interviews. We performed path analyses to test our model. Results We tested our theoretical model through path analysis. Our research model showed a moderate fit ($\chi^2=38.923$ (df=6, p=.000), $\text{CFI}=.942$, $\text{TLI}=.825$, $\text{SRMR}=.040$ and $\text{RMSEA}=.129$). When looking at the regression weights of the hypothesized relationship, we noticed that several relationships which we put forward in our theoretical model were not significant. In essence, feedback delivery did not significantly influence procedural justice and promoting feedback seeking and teacher participation did not significantly influence distributive justice. Hence, it is justified to delete these relationships in our model. Also, modification indices indicate that our model would benefit from the integration of the relationship between supervisor credibility and organizational commitment. This relationship has also been found in other studies (e.g. Ebmeier, 2003). We adjusted our model and retested it. The adjusted model has a good fit ($\chi^2=12.723$ (df=8, p=.122), $\text{CFI}=.992$, $\text{TLI}=.981$, $\text{SRMR}=.036$ and $\text{RMSEA}=.106$).
SRMR=.022 and RMSEA=.042). Our results indicate that there is a differential influence of the supervisor feedback environment on procedural and distributive justice. Supervisor credibility and availability influence both procedural and distributive justice. The promotion of feedback seeking is only significant for procedural justice, while feedback delivery is only significant for distributive justice. Both procedural and distributive justice influence teachers’ organizational commitment significantly. The teacher evaluation system characteristic which we included in our model significantly influences teachers perceived procedural justice. We notice the strongest relationships stem from supervisor credibility which influences both procedural and distributive justice significantly and also directly influences teachers’ organizational commitment.

Conclusion. This study presents an integrated model of two types of variables (i.e. supervisor feedback environment and a teacher evaluation system characteristic) that might influence teachers’ affective outcomes. This model fills a gap in current literature because there is a need of empirical research about the potential of teacher evaluation and supervisor feedback. Our study clearly indicates teacher evaluation and feedback environment should not be ignored as means to stimulate affective teacher outcomes.

F6.3 Teachers of teachers in schools and universities: Researching dual perspectives on knowledge and identities
Jean Murray, Gerry Czerniawski and Warren Kidd, University of East London, United Kingdom

Abstract
Objectives and rationale. Pre-service teacher education in England has faced radical changes in government policy recently. A number of studies (Harrison & McKeon 2008; Murray et al, 2011) indicate that this sustained state intervention in the field has derogated the already uncertain authority of teacher educators, particularly in Higher Education. Addressing these concerns, this paper presents findings from two inter-related parts of an interpretive study which explored how the knowledge bases of teacher educators were perceived by two key groups - HE-based educators and school-based teacher educators, known as mentors in the English system. The paper then discusses the implications of the findings for teacher educators’ professional development.

Theoretical framework. This interpretative study is framed within a sociological concern with the (re)production of social practices in education. The field of teacher education is conceptualised as ambiguous and ill-defined (Bourdieu 1987). The study theorises teacher educators as agents involved in (re)producing and legitimising the discourses and practices of schooling and teacher education. HE-based teacher educators are conceptualised as entering this field, always from schools in the English system, with distinctive professional dispositions. These have, in part, formed their knowledge bases. School-based teacher educators (known as mentors) educate students within schools; their positioning and their knowledge bases are therefore different, though no less complex.

Methods and data sources. This interpretive study draws on qualitative research methods for multi-case embedded studies and was conducted using established ethical guidelines. In each part of the study, data from a large sample was first collected by questionnaires. Following data analysis, a purposive sample from each group was interviewed to explore resulting issues in more depth. Part 1 collected the views of HE-based teacher educators;
and part 2 used the same research methods to identify the views of mentors. Results and conclusions. The findings showed commonalities around the understanding of pre-service programmes as stressful and demanding. Both groups also stressed the importance of experiential knowledge of schooling and professional guidance for student teachers. Mentors tended to conflate pedagogical expertise in school teaching with similar pedagogical skills for teaching adult, professional learners. HE-based teacher educators stressed a unique set of pedagogical skills and knowledge required for teaching teachers. Some, but not all, members of this group were also the only ones to stress the centrality of research in underpinning teacher educators’ knowledge bases. These findings indicate how profoundly the ‘discourse of relevance’ (Maguire & Weiner, 1994) has influenced perceptions of teacher educators’ knowledge bases in England. Scholarly significance. There is a growing literature on teacher educators in schools and HE, but few studies research how their knowledge bases are viewed from the sometimes contrasting professional perspectives of teacher educators and mentors. Exploring these perspectives will, we hope, contribute to the improved understanding of teacher educators’ knowledge, to the growing international literature on this occupational group, (Korthagen et al 2005) and to the generation of strong professional development programmes for all, whether they work in schools and universities.

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<td><strong>Learning in a spectrum of learning environments</strong></td>
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<td><strong>F7.1</strong> Fostering deep learning and knowledge development in competence-based pre-vocational secondary education: A case study</td>
<td>Maaike Koopman, Eindhoven University of Technology, The Netherlands</td>
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| **Abstract** | Introduction and theoretical background. In the Netherlands, about 50 to 60 percent of the students between 12 and 16 years of age attend schooling in Pre-Vocational Secondary Education (PVSE). Recently, in a part of these PVSE schools competence-based learning environments have been implemented. In these learning environments active student learning is strived for, often using authentic projects in which theory and practice are integrated as the starting point for learning. Competence-based learning environments are supposed to make an appeal to students’ intrinsic goal orientations and deeper learning processes (Koopman, et al., 2011a). Development of competencies is aimed at, thus focusing not only at the development of skills and attitudes, but also at development of student knowledge (van Schaik, et al., 2010). There are some indications that student motivation can indeed be enhanced in such learning environments. It seems to be more difficult for teachers to also evoke deep learning and knowledge development. In a quantitative study (Koopman, et al., 2011a; Koopman, et al. 2011b), one school succeeded in realizing aims related to competence-based education, and could thus be considered a good practice. Compared to 13 other schools, students in this school preferred deep learning activities to a larger degree than their peers. Also the elaborateness and organization of their knowledge increased more strongly compared to students in the other schools. A case study was therefore carried out aimed at investigating the characteristics of...
that learning environment in terms of the content and organization of the program and the manner in which students were guided by the teachers (cf. de Bruijn, et al., 2005). The central question in this study was: Which characteristics of the learning environment and which knowledge and behaviours of teachers regarding student guidance promote students’ learning processes and the development of knowledge?

Method. Two teachers of the school that was labeled a good practice participated in the case study. Based on the hours spent with the students, these teachers were selected from the group of eight teachers that were responsible for the program. In order to gain a detailed picture of the learning environment they created, data was gathered by means of (a) a general interview about the teachers’ knowledge and beliefs about teaching and learning, (b) two observations per teacher of lessons they gave, and (c) stimulated recall interviews about these lessons.

For the analysis of the data, a model of characteristics of competence-based learning environments and student guidance of de Bruijn and colleagues (2005) was used. The content dimension of the model concerned the manner in which learning content was dealt with, for example in terms of the authenticity of tasks, the integration of subject areas, and the ambition to have students learn in an active, explorative way. The guidance dimension concerned the different types of systematic student guidance teachers can provide (e.g., instruction, provision of active support, coaching, provision of help when necessary, or feedback). Using this model as a framework, portraits could be made about the learning environments of the teachers.

Results and conclusion. Results showed that both teachers implemented many of the characteristics described of the model of de Bruijn and colleagues (2005). The teachers appeared to create well-structured competence-based learning environments in which provision of active support was very important. Teachers enhanced deep learning and knowledge development in several ways. Teacher portraits showed Teacher 1 (T1) to be an enthusiastic teacher that thinks along with students. When the students set out to design something, he continually assisted them in their thinking. He often had students experiment in order to have them discover critical principles on their own. An important characteristic of T1’s teaching was that it was highly student-centred and that the students’ own designs constituted the starting point for their learning. Teacher 2 (T2) could be characterized a reciprocal teacher (Palincsar & Brown, 1984): when guiding students, he tended to pose counter-questions as opposed to direct answers to their questions. In such a manner, he could be seen to deepen student learning. In the counter-questions and examples T2 mentioned, he raised critical concepts and principles. The students were then left to seek an explanation for the concepts and principles themselves. The content of T2’s lessons was determined at least in part by input from students. That is, the questions of students provided the basis for their own learning. The actions of both teachers were largely intentional. In the interviews, they were able to label the relevant starting points for their teaching. They could also provide clear explanations for their behaviour.
Learning in the context of self-organised virtual communities: A new challenge for teachers
Teobaldo Rivas, Noeli Prestes Padilha Rivas, Edson Walmir Cazarini and Glaucia Maria Da Silva, Universidade de São Paulo, Brazil

Abstract
This article discusses the results of research which aimed to investigate how the learning process occurs in the context of self-organised virtual communities. The research was developed by the School of Engineering of the University of São Paulo (USP) and conducted from 2008 to 2009. Contemporary society has been influenced by significant social, economic, cultural, political and anthropological changes; these changes, in turn, have considerable effects on the development of people and their educational processes. The role and impact of new media in the construction or acquisition of knowledge, in the form of teaching and learning in this new era and in new educational spaces, emerges in this context (Lévy, 2010). The idea of the coexistence of different types of interaction and communication is important to this scenario. For example, using the Internet for teaching and learning can be unidirectional: this challenges teachers to change teaching methods. These changes are supported by work developed in cooperative networks, which includes communication mechanisms that allow people to see, hear and send messages to each other (KENSKI, 2010). To Kerckhove (1999) "the mega convergence of hypertext, multimedia, virtual reality, neural networks, artificial life and digital agents influence the modes of communication, entertainment and work" (p.242). This condition is called ‘cognitive webness’ or ‘intelligence connection’. Teaching mediated by digital technologies can change the vertical teacher-student structures and the linear interaction with the information and the individual and social construction of knowledge. Virtual environments for teaching replace old ways. We realized that educational resources are being designed, developed and integrated to be available and shared in virtual learning communities and collaborative work. This scenario motivated the development of research on technology applied to education as it implies new ways of providing effective support to teaching, learning and collaborative work, especially in virtual environments. Specifically, the above raises an important research question: How does learning occur in the context of self-organised, virtual communities to solve problems? The research consisted of empirical and ethnographic analysis (HINE, 2000) of self-organised virtual learning communities, applying the meaning of intermediation with personal action as a unit of analysis, mainly from studies of Vygotsky (2007) and Wertsch (1991). Data collection was conducted in two phases, in the discussion forums of four self-organized virtual communities. It appears that discussion forums assume the role of learning objects and mediate the troubleshooting process, since 100% of the analysed problems were resolved, despite the absence of a pattern of compliance. The absence of a standard was overcome by the prevailing profiles of the active members of the community, specifically, their high levels of performance collaboration and cooperation, initiative, selflessness, self-will, self-learning ability, independence, discipline, responsibility and commitment to deadlines and quality. Considering the knowledge generated through the discussion forums, the analytical method of Wertsch (1991) focused this research on the ways in which the forums mediate the achievement of effective learning environments. The communities investigated were
rich in human interaction, qualifying them as environments of mediation and collaboration. Moreover, the sustainability of the discussion forums is not only dependent on the personal attributes and skills, because the location of the information that is needed to solve problems is based on the implicit knowledge of its members. Innovations to the form and functionality of such communities—compliance to a standard, methods, and technological tools for semantic search—were suggested by the research. Such innovations enable effective and universal accessibility to the knowledge that produced the most efficient solution to the problems; as well, they facilitate the participation of members with different skills and behaviours. The results of this research contribute to innovations in the field of education; by encouraging the use of discussion forums as an educational resource, teachers innovate their teaching practice and students become more autonomous in seeking solutions to issues and developing their cognitive and procedural skills.

F7.3  Transformative approach to on-line learning environments in a HE teachers’ development project
Leena Paaso, OUAS School of Vocational Teacher Education, Finland

Abstract
On-line learning and tutoring as well as traditional learning environments have their roles in education. Today the students in the master programs in Oulu University of Applied Sciences (OUAS) work and study whole time simultaneously and need special supported on-line applications for their master studies. Social media deviates from traditional learning environments by their administrative characteristics. Consequently, this leads to the challenge which appears in the usage of on-line learning including social media in school contexts: the teacher has to acquaint her-/himself carefully with the terms of operation to be able to reflect critically on the practices, since reflection without a critical view does not include the functional element of change. Transformation concerns changes in the basic perceptions of context and meaning complexes. Thus it presupposes personal and community development in thinking and action. (Mezirow 1990).

In OUAS the amount of on-line teaching and tutoring will be increased in the coming years (2012-2015) considerably. The teachers will be acquainted more thoroughly with them and their ICT learning competences will be supported. Teaching will be made flexible by emphasizing chosen technologies which will be given full support.

The development project aims at increasing the amount of shared multi-subject study courses to the master programs as well as produce specialized courses for different programs including common topics. Another purpose is to develop teaching and teaching methods as well as learning environments. The present research aims at finding the needs of teachers to produce on-line learning material and the measures how to support vocational HE teachers in it. The first step is to find the existing common areas in the programs by a content analysis.

The research questions were:
1) Are there any common themes in the study plans of all master programs in vocational higher education?
2) What kind of on-line learning models based on the thematic needs would be recommendable according to the master program educators?

The research was carried out using a mixed method approach to integrate both
quantitative and qualitative methodologies as well as to avail of their complementary nature. (Johnson & Onwuegbuzie 2004). This research is also supported by action research data which included both qualitative and quantitative (research) material. The research material was collected from official documents (research question 1) and from the teachers in the master program (N=31) (research question 2).

The analyzing process was carried out at the beginning of 2012 concerning the contents of the master programs in the OUAS and the present local situation of both virtual and multimode teaching. The good practices in different master programs were also charted in order to apply them widely to various fields of learning. After the analysis the desirable measures were evaluated and the existing measures compared to them to find out the need of support and further education needs. This evaluation was carried out through the self-assessment of the teachers. The evaluation resulted in introducing the cooperative support services to promote the use of virtual and multimode teaching as well as to enhance the use of social media.

The analysis (research question 1) revealed four themes which were taught in all master programs in OUAS. The themes were:
1) Anticipation and understanding of future work life
2) Entrepreneurship competence
3) Research, development and innovation competence
4) Competence in leadership and management

Within the themes the practices in realizing them varied greatly as did also their extent and credits. In every master program the teachers produced material independently to the studies within the themes.

The research results (research question 2) show that most teachers felt that they needed tutoring in the basics of on-line pedagogy and even in on-line writing. They lacked everyday practices in on-line teaching, although they could use basic desktop applications. It means that they did not have a holistic conception of the on-line learning and the different benefits from it. They wished that they should have an ICT support person available all the time they were teaching or using on-line methods. The teachers listed single techniques, devices or methods they would like to have tutoring in.

The research helped to find existing common themes, but the ways how to realize them will need a lot of work. The added value in this development project will come from the possibility of shared building processes.

Session number: F8  Location: Room 1C  Time: 11.00 – 12.30

<table>
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<th>Specific competencies to teaching</th>
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<tr>
<td><strong>F8.1</strong>  Undergraduate student teachers’ views on the value and pedagogy of a compulsory course in research methodology: A case study</td>
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<td>Kobus Lombard, North-West University, South Africa</td>
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**Abstract**
Orientation. Kotsopoulos, Mueller and Buzza (2012:22) claim that it is essential to meaningfully connect research and practice during pre-service teacher education. While the benefits for student teachers’ exposure to the theory and practice of Research
Methodology are undisputable, associated challenges cannot not be ignored (Gitlin, Barlow, Burbank, Kauchak & Stevens, 1999). Since Research Methodology is regarded by many students as a complex and strenuous course, these views pose particular challenges to lecturers in terms of curriculum and pedagogical matters. Moreover, poor performance in Research Methodology could result in student anxiety and subsequent negative attitudes towards the field of educational research (Schober, Wagner, Reimann, Atria & Spiel, 2006:74).

Research question and purpose statement. This research was prompted by the question: What are the views of a cohort of undergraduate student teachers regarding the value and pedagogy of a compulsory course in Research Methodology? The corresponding purpose of the research was to determine the views of a cohort of undergraduate student teachers regarding he value and pedagogy of a compulsory course in Research Methodology by means of a quantitative survey.

Conceptual framework. Research Methodology is included in the final year teacher education curriculum of South African students enrolled for the B.Ed. - degree. Anchored in a constructivist approach, the course comprises an orientation towards Research Methodology within educational contexts and introductory quantitative and qualitative theory. Factual knowledge, is highlighted and introduced by the lecturer, and is further made accessible to students through a prescribed textbook and additional lecturer notes. By following a social constructivist route, students are expected to complete structured exercises on the theory by collaboratively working in pairs. Eventually, the theory culminates in the planning, preparation and submission of a research proposal which is also done in the same pairs. According to O’Donnel and King (1999) peer learning enhances cognitive growth, while Johnson, Johnson and Stanne (2000) and Brooks and Ammons (2003) assert that it enriches social competence. Scott-Ladd and Chan (2008) also draw attention to the fact that peer learning increases motivation and engagement. The value of peer learning or working in pairs in this particular case, is further inspired by research evidence by Fox (2007:269), which revealed that the use of social constructivist principles strengthen students’ understanding of research and research processes. As a result, students are afforded opportunities to negotiate meaning by scaffolding their understanding of the theory underpinning Research Methodology by also transferring it to the practice (writing a proposal). Hence, it can be concluded that students’ learning is rooted in Lave and Wenger’s (1991) notion of a community of practice where interactions and participation shape learning.

Methodology. The research respondents consisted of 158 fourth year B.Ed. students. The students were conveniently sampled as they were all enrolled on the campus on which the author lectures. Since the study was approached from a quantitative angle, a questionnaire containing close and open ended questions was developed. In terms of validity, the construction of the questionnaire was guided by the research question. It included items on how students value Research Methodology and what their opinions are on the pedagogy (working in pairs) which was followed in presenting the course.

Results and conclusion. The questionnaire was administered at the end of the 2012 academic year (October). For this reason no research results are available to date and consequently no conclusions could be drawn. However, it is envisaged that the study will sufficiently capture students’ views to enable the author to obtain valid and reliable data to
The author is confident that the research results will contribute to a better understanding of how students benefit (or not) from doing a course in Research Methodology and how such a course should be approached in future.

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<th>F8.2</th>
<th>Perspectives on the impact of English as a global language from non-native speaking teachers in Thailand</th>
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<td>David Hayes, Brock University, Canada</td>
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**Abstract**

The position of English as the most widely-spoken international language in the world is unquestioned. However, powerful arguments have been advanced that English is not simply a neutral language of global communication but that it remains a language to which colonial discourse still adheres and which must, therefore, continue to be seen as an agent of neo-imperialist forces, an instrument of the foreign policy of the major English-speaking states. What is often lacking in such arguments, however, are the voices of those who are said to be subjected to these forces. For example, how do non-native speaking teachers of English in countries where the language is not indigenous, but where it is used in various aspects of life or taught in the educational system, feel about the language? What effects does its use have upon their sense of identity? Do they believe that the use or the teaching of English brings undesirable values into their own cultures? There is much assertion surrounding these questions but less empirical evidence from those outside the west who use English in their professional lives. This paper contributes evidence to the debate from the perspectives of English language teachers in Thailand. Using data from extended life-history interviews, the paper discusses teachers’ attitudes to English and to English-speaking cultures, the teachers’ perceptions of the impact of English on their identity and on their own society, and their views on the value of English in their daily lives. The data indicates that teachers are aware of the possible negative effects of English but are also mindful of its instrumental value in their own lives and those of their students. Negative effects on teachers’ sense of identity were not reported.

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<th>F8.3</th>
<th>School settings as places for teacher educators’ professional development: The case of a university-school partnership in language education</th>
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<td>Ana Sofia Pinho, Ana Isabel Andrade, Universidade de Aveiro, Portugal and Flávia Vieira, Universidade do Minho, Portugal</td>
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**Abstract**

Language teacher education has been facing the demand of educating teachers in the development of a plurilingual and intercultural teaching (Balsiger et al. 2012; Beacco & Byram 2007). Lately, focus has been given to teacher education institutions, their role and that of teacher educators and researchers in supporting teachers in this scope, since they are required to develop more context-sensitive teacher education frameworks (Andrade and Martins 2012; Andrade and Pinho 2010; Etienne et al. 2009). In this setting, collaborative dynamics and communities are considered crucial, particularly when these are situated in the school context and involve both schoolteachers, and academic researchers and teacher educators as members (Vieira 2009; Zeichner 2010). Based on this idea of peer learning in teacher education, partnerships between teacher education institutions and schools have been considered a challenge in need of response not only in terms of policy and leadership, but also of teacher education scenarios and
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dynamics (OECD 2010). In this setting, a broad set of studies has been carried out whose focus is on teachers’ professional development and the benefits of such collaborative environments to teaching effectiveness and innovation. Yet, the roles and professional development of teacher educators and academic researchers in such communities seem to be an under-researched topic, particularly within plurilingual and intercultural teacher education (Flores et al. 2011; Murray and Harrison 2008; Pinho 2010; Swennen and Bates 2010).

The issue is then, how can university-school partnerships within plurilingual teacher education contribute to the professional learning of academic researchers/teacher educators? Particularly, what role(s) do they play in those school-based professional learning communities, in the context of such partnerships?

Taking this theoretical background into account, the project “Towards a Didactics of Plurilingualism in the school context: dynamics of collaboration university-school in the construction of a professional learning community” (SFRH / BPD / 68427 / 2010) had in view the creation of a professional learning community constituted by the Language Department of a Secondary school and an academic researcher/teacher educator. The dynamics of such community evolved around a flexible, continuous teacher education programme about plurilingual and intercultural teaching, in which schoolteachers and the academic researcher/teacher educator played diverse roles.

Taking this project as a site of enquiry, the study intends to (i) firstly, trace the scenario of the researcher/teacher educator’s role(s) in the community and partnership, from her intentions and actions to how these were interpreted by the schoolteachers and reframed in the light of emerging interests and needs; and (ii) secondly, bearing in mind that such partnership is entering in a new phase of development, to reflect upon how the findings may be reinvested to expand the university-school partnership dynamics and shape planning for future action together in a more sustainable way.

Methodologically, we follow a hermeneutic perspective (Cochran-Smith & Demers, 2008), conciliating it with a case study methodology of teacher education programmes (Zeichner 1999), in order to understand the role of the academic researcher/teacher educator not only in terms of the partnership constitution but also in the knowledge base development within plurilingual and intercultural education within the community. The analysis is interpretative and resorts to multiple sources of data, which will be triangulated: personal reflective accounts of the schoolteachers, researcher/teacher educator’s portfolio, transcriptions of working sessions, and discussion forums of the Moodle platform.

Based on the story so far, we can say that university-school partnerships are complex, multivocal settings that require and foster learning about context-sensitive teacher education and the role of academic researchers/teacher educators in those partnerships. Valuable lessons were drawn to construct the future of the partnership towards a more sustainable collaboration, and assist the professional development of both the researcher/teacher educator and the schoolteachers.
Problem Statement. Most would agree that students in compulsory education need to become more scientifically literate. However, a science functional literate student is not equipped to confront complex, ill structured socioscientific issues that they will encounter regularly as citizens (Hodson, 2011, Mueller & Bentley, 2007). Students require knowledge, skills, and dispositions that enable them to critically and responsibly deal with an ever-increasing scientific and technological society. One way forward is to engage students in authentic, relevant and meaningful learning activities nested in their school communities. This innovation can help students become more engaged in learning science, help students connect their science learning to other subjects, and strengthen students’ understanding of science and their capabilities for responsible citizenship in their community. Nevertheless, the role of science teachers in terms of their capacities to develop effective curriculum and pedagogy in this regard has not been successfully investigated. This proposal will report upon initial findings from a project aimed at exploring teaching science in school-community collaborations. A systematic and interpretive review of current knowledge in this field will be presented. The overall project aims to address a gap in the research with respect to science teaching methods in relation to school communities.

Conceptual Framework. Historically, the conceptualizing of scientific literacy has been a contested and esoteric endeavour (Dillon, 2009; Roberts, 2007). Nevertheless, pundits agree that increased scientific literacy of students and citizens will have societal benefits. While science career goals are always part of any public declarations of scientific literacy, democratic and responsible science citizenship goals are just as important as economic ones. Without question, democracy is strengthened when all students are equipped to learn, evaluate and respond to socioscientific issues (Aikenhead, 2006). The empirical research with science students is also clear: life science topics (environment and health) are considered the most well-liked by adolescents (Sjøberg & Schreiner, 2010). For this reason, community-based topics typically involving environment and health in science education are excellent curriculum topics for school science, representing matters that have great potential to engage students and teachers alike.

Place- and community-based education is an approach to teaching and learning that connects learning to the local (Smith & Sobel, 2010). This alienation results in many societal challenges (Bowers, 2001; Hutchison, 2004). Evidence suggests that this perspective provides a way for students and teachers to become local problem-solvers and deal with issues that are of consequence for the community. In science education, while there have been some efforts to research and develop community-based science perspectives (Author, 2010; Bouillion & Gomez, 2001; Tytler, 2007; Rennie, Venville, & Wallace, 2012) more research is required regarding science curriculum, teaching and learning and school-community connections. Findings and Conclusions. Using an interpretive review perspective a qualitative best evidence review of all literature related to school-community and the
teaching and learning of science was conducted. Interpretive reviewing involves application of a qualitative methodological approach (Eisenhart, 1998) with an emphasis on the interpretative role of the reviewer. This interpretive synthesis involved the collection of all empirical studies, reports and practical commentaries on the topic. These included: refereed and non-refereed journal articles, proceedings from academic conferences, books and other monographs, newspaper articles, local and federal government reports, dissertations, and other pertinent texts including websites. General criteria for narrowing the scope of review included timelines (1990–present), and keyword bibliographic searches in journal, abstract and citation databases (e.g., SSCI, ISI).

A total of 232 items were included in the synthesis. The majority of items analyzed were empirical peer-reviewed academic/practitioner articles, and technical reports. Each item was read and major themes were identified using a coding procedure, categorized into similar paradigms and synthesized (Creswell, 2003). An amalgamation was constructed of the findings using both prose and graphic organizers. Analyses revealed three overarching themes in the literature about school science and community: (i) types of partnerships; (ii) pragmatic and scholarly goals of partnerships; (iii) implementation strategies of partnerships. Overall school-community science partnership can be classified as technical, collaborative, or participatory. Of concern was the notion that teacher knowledge and expertise lagged behind in emphasis with respect to the creation and development of these school partnerships. More research is required to better bridge communities and science classrooms in order to promote outcomes beneficial to all participants. This presentation will summarize and provide recommendations on how to support both community and educational outcomes in order to present a fuller theorisation of students’ science learning in the community, and the ways in which science teachers can better mediate and facilitate the classroom and community environments using more innovative curriculum and teaching methods.

F9.2 The effect of productive inquiry on pre-service teachers’ problem solving ability and performance in chemical stoichiometry
Thomas Sedumedi, Tshwane University of Technology, South Africa

Abstract
This paper reports about a study on two methods used to teach problem solving in chemical stoichiometry. The methods were the direct lecture method (DLM) and the productive inquiry method (PIM). The objective of the study was to explore the effect of the methods on problem solving abilities of preservice student teachers (PST) in chemical stoichiometry. The PIM was used as an intervention method and the DLM served the role of benchmarking conceptual understanding. In effect the study was observe students’ knowledge structures through their functioning on problem solving and subsequently on students’ performance or achievement on chemical stoichiometry topic. Data was collected and analysed using the quantitative and qualitative methods. The analysis of students’ knowledge structures was based on the combination of the two perspectives used to describe knowledge. That is knowledge is here viewed as theory and as made of elements. The findings on student problem solving abilities were found to vary within and across the two methods. Within the methods individual students exhibited different responses. Across the methods the PIM was generally a better method for enhancing problem solving. In light
of these findings it can be concluded that students have preferences towards teaching methods or environments. The outcome of this study suggests the need to mix teaching environments to maximise learning of diverse learning styles of student cohorts. This study has confirmed preferences of teaching methods or environments by students as not all of them improved their abilities by the PIM intervention.

**F9.3 Science classroom instructional language unmasked: For the attention of science teachers and teacher educators**  
Samuel Oyoo, University of the Witwatersrand, South Africa

*Abstract*
Science teachers’ use of the instructional language in classrooms as a factor in quality teaching and learning (levels of students’ understandings and retention of scientific concepts) has been a rare focus in science education research worldwide. This presentation reports and discusses findings in an exploratory investigation where the main question was: How is the manner of use of language of instruction in the classroom by the science teachers a source of the difficulties students encounter in learning and retention of scientific concepts? Direct classroom observations, interviews with school science teachers and content analyses of their verbatim classroom talk were used as the methods of data collection. Interpretive approaches including content analyses of the verbatim classroom utterances of participant teachers were used in the analysis of the data. Participant teachers’ approaches to use of language during teaching and their opinions on their practice provide evidence of when science teachers may contribute to making the learning of science concepts more difficult to their students. The article concludes with a discussion of the implications of the findings on initial preparation and continuing professional development of school physics teachers.

**Session number: F10**  
**Location: Room 2C**  
**Time: 11.00 – 12.30**

**Paper presentations**  
**Teacher identity**

**F10.1 In search of a framework for student teachers’ normative professional development**  
Sabine van Den Brink, Hartger Wassink, Hogeschool Utrecht, The Netherlands and Cok Bakker, Utrecht University, The Netherlands

*Abstract*
Problem statement. Although the view that teachers’ professional development should include the moral aspects of the profession, and although reflection of student teachers has become an important element in teacher education, teacher education programs still pay relatively few attention to aspects of normative professional development. In this paper, we describe the development of a tentative framework for teachers’ normative professional development. In the development of this framework, we aim to link perspectives on the moral aspects of the educational profession, with theories on teacher professional identity development, and current insights on dialogical learning.

Theoretical framework. Teaching as a moral enterprise. Education is at heart a moral practice (Biesta, 2007). Therefore, in teacher education attention is needed for students’ normative professional development, in balance with the ‘technical-instrumental’ aspects.
of the professional development (Kelchtermans, 2009; Kunneman, 1996). Teachers have an important role in learning students what is asked of them as responsible citizens in a democratic society (Biesta, 2010; Onderwijsraad 2011). Therefore, they need to become sensitive to the moral dimensions of education, as an integral part of their professional identity (Leeman & Wardekker, 2011).

Although this view on a broader professional development of teachers, has gained more support over the past 15 years (see also Hargreaves (2000)), in teacher education the time and attention devoted to the normative professional development of (student) teachers, has still been limited (Beijaard, 2004; Pinnegar, 2005).

Teachers’ personal and professional identity development. Mostly, reflection of student teachers on their actions is seen as an important means of enhancing students’ capacity of moral reasoning. Reflection has gained in importance over the past decade as an element of teacher education (Korthagen & Vasalos, 2005). However, there is a general uncertainty how this reflection can touch upon moral dimensions of teaching in an effective way (Kelchtermans, 2009). Reflection should not only include questions of ‘how’, but also questions of ‘why’ and ‘what purpose’ (Biesta, 2010).

Dialogical learning. By engaging in this ‘deeper’ reflection, teachers’ personal and professional identity is being developed in a dynamic process (Akkerman & Meijer, 2011). Identity development can be conceived of as a continuous process of an ‘I’ that positions itself in relation to an ‘Other’ (Hermans, 2002). In this process of intra- and interpersonal dialogue, teachers articulate their personal values and explore how they relate to each others’ values and to those of the teaching profession.

In the post-modern era, teachers as professionals need to cross existing boundaries that have defined the profession (Hargreaves, 2000). Touching upon and crossing such boundaries entails the exploration of differences and similarities in conceptions of self, deeply held convictions and perspectives on teaching as a profession. This process carries a huge potential for learning and development (Akkerman & Bakker, 2011).

Research questions. Which criteria can be articulated to develop a framework for teachers’ normative professional development, that accounts for theoretical insights related to teachers’ normative reasoning, as well as experiences of teacher educators’ practice?

To answer this questions, we have performed a two-step qualitative analysis of the way student teachers recognize moral issues during their training years. Firstly, we have examined written ‘personal visions’ of recently graduated students. Secondly, we examined the way students discuss morally-charged problems they encountered during their internships.

Results.

- Criteria for normative professional development of teachers can be derived from practice and theory.
- When student teachers are given a ‘free’ assignment to write about a personal vision on their profession as a teacher, they seldomly describe the link between their professional practice, the wider educational context or the quality of their personal life.
- When asked to reflect on a specific case, student teachers seem to be better able to link normative aspects of their actions or attitude as a teacher to the results they achieve with pupils.
- Therefore, a framework for ‘effective’ normative professional development of teachers
should include
- conscious reflection on dilemma’s as they occur in actual, daily educational practice,
- linking practice to differences in the quality of education as perceived by teachers, pupils and parents within the broader cultural and civil context.

In the paper, this framework is presented, and a proposal is made how a series of questions on the image of the self as ‘I’, and ‘Other’, can shape the dialogue between teachers, to explore each others perspectives on the normative aspects on the teaching profession, induce boundary crossing and professional learning.

### F10.2 A longitudinal study of student teachers’ professional identity development

Äli Leijen, University of Tartu, Estonia and Katrin Kullasepp, Tallinn University, Estonia

**Abstract**

This research on student teachers’ professional identity development contributes to recent trends in teacher identity research (Akkerman & Meijer, 2011; Alsup, 2006) that focus on the integration of the 'personal' and 'professional' sub-systems of Self during the processes of learning to teach by students or beginning teachers. In order to find out how do final year student teachers coordinate personal and professional sub-systems of the self when solving ambivalent work situations during the initial teacher education, we turn, in this paper, to the concepts of ‘internalization’ and ‘externalization’ (Valsiner, 1997) that contribute to the re-construction of the personal culture of an individual and the theory of Dialogical Self (Hermans & Hermans-Konopka, 2010) which enable focusing on the result of person-institution dialogue at an intra-psychological level.

**Methods**

A longitudinal study of two years was carried out. 17 students from different teacher education programs in one university in Estonia participated in the study. Student teachers’ professional identity development was monitored four times (once a semester). Double Direction Theme Completion Questionnaire (DDCQ, Kullasepp, 2008; Leijen, Kullasepp, in press), was applied to investigate the individual trajectories of identity development. The DDTC is an extended version of the traditional sentence completion task (Symonds, 1947) that provides the temporal profiles of the coordination of personal orientations and professional roles. Relations (with colleagues, students, acquaintances) associated with the teaching profession served as a basis for selecting the dilemmas. Based on these relations, typical situations were chosen that would activate the inner dialogue between “I as a person” and “I as a professional”. For example, in case of a dilemma related to ‘providing confidential information to third parties’ the student was triggered to identify how she communicated about the tension between the professional role and the personal domain. Second, the student was invited to indicate how she solves ambivalent dilemmas – whether she presents a professional or personal position, or reports about a ‘coalition’ between the positions.

The qualitative data analysis procedure consisted of several steps. Firstly, students’ answers were analyzed by one researcher. Regarding each answer, communication about the tension between the I-positions (Hermans & Hermans-Konopka, 2010) was identified. Regarding the tension, three codes were distinguished: reporting negatively orientated tension, reporting positively orientated tension, and communicating no tension. Secondly,
the I-position used to solve each dilemma was identified and coded. Regarding I-positions, four codes were distinguished: professional, personal, ‘coalition’ between professional and personal (appeared only 5 times), and unknown. Secondly, 198 randomly selected answers from a larger data-base were independently analyzed by a second researcher to test for inter-rater reliability. This resulted in inter-rater reliability score of 0.93 (Cohen's Kappa) regarding communication of tension and 0.84 (Cohen's Kappa) regarding the different I-positions. Finally, regarding each student, a within-case analysis was carried out to identify different trajectories of professional and personal identity development by one researcher. Results. Results revealed seven developmental trajectories of professional identity development. In accordance with socialization in a professional community and the internalization of social messages related to role expectations (Valsiner, 1997) a tendency toward professionalization (4/17, reporting of a professional position had increased and was predominant across solutions to nine dilemmas during the latter data collections) in solving ambivalent dilemmas was expected. However, current study showed that other developments such as de-professionalization (3/17; high reporting of professional potions decreased in the course of four data collections), personalization (1/17), and strong fluctuation between positions (3/17; I-positions had changed; however, the changes could not be assessed in a clear way), and stable reporting of positions (6/17) appeared as well.

F10.3 Developing professional identity of teachers through narratives
Mary Kooy, University of Toronto, Canada and Ietje Pauw, University Katholieke Pabo, The Netherlands

Abstract
Discussions of teacher identity have become important in light of the knowledge that perceptions of the professional self affect and shape how teaching transpires in the classroom (Gaudelli, 1999, 4) and ultimately, influences how students learn (Barty, 2004; Danielewicz, 2001; Mitchell & Weber, 1999). Always in process and fluid, identity is continuously under construction. The paper explores how teacher identity emerges through narratives and that such identity work begins with pre-service teachers and develops as teaching careers evolve.
was concluded that the time available for students to complete a worthwhile dissertation (of between 5000 and 8000 words) had been reduced substantially, due to the increased attention required for the demonstration of the Qualified Teacher Status Standards. Given the importance for teachers to disseminate their good practice in a more evidence-based and academic way, and recognising that, currently, the degree programme was not preparing them for this challenge, it was decided to replace the dissertation with a research article.

In writing the article, students were able to choose from an extensive list of topics or to propose an alternative topic. They were asked to write in the style of one of three identified journals. Research articles were approximately 3500 words in length. Students were informed that two approaches were possible: either desk-based research involving a critical review of the literature on a particular theme or a small-scale piece of empirical research, undertaken in a local primary school and underpinned by a shorter literature review.

This paper will address the ways in which this initiative was implemented and evaluated. Key points will include the discussion of feedback provided by two cohorts of final year ITET students through the completion of a questionnaire. The possible impact of this form of assessment on the students’ future professional development will be discussed. Consideration will be given to the benefit of the initiative for teachers, in terms of improving practice based on their own research. Additionally, such a process will be evaluated in the context of building the research capacity of the ITET staff team through collaborative publication. At the time of writing this proposal, a special issue of Glyndŵr University’s The Journal of Pedagogical Research and Scholarship, devoted entirely to ITET students’ research articles, is in preparation and will be published in October/November, 2012.

Main Points of the Presentation:
- Introduction: ITET students as: (i) practitioner researchers; (ii) authors of published research.
- Why should ITET students be encouraged to undertake a research article?
- Module in which the research article is assessed: ‘Education and Professional Studies: Wider Issues in Teaching and Learning’.
- Key aspects of module content: (i) Undertaking a literature review; (ii) research methodology; (iii) completing the University’s research ethics documentation; (iv) citation and referencing; (v) writing the research article; (vi) publishing the research article.
- Module assessment: the research article.
- Evaluation: analysis of a questionnaire completed by ITET students.
- Publishing ITET students’ research articles: Glyndŵr University’s The Journal of Pedagogical Research and Scholarship.
- Enhancing the research capacity of the ITET staff team through collaborative publication with ITET students.
- Initial teacher education and further professional development: a way forward.
- Developing research-informed practice: the role of ITET students and teachers.
Monika Louws, Klaas van Veen and Jan van Driel, Leiden University, The Netherlands

Abstract

Teachers develop professionally throughout their careers. Research on the course of teachers’ careers has shown that within these careers, professional life phases can be distinguished (Day, Sammons, Stobart, Kington, & Gu, 2007; Fessler & Christensen, 1992; Fuller & Brown, 1975; Huberman, 1993). These phases are related to the amount of years of teaching experience and have been characterized by different themes that are relevant to most teachers in the same phases of their careers; themes that relate to the way teachers experience their work and the development they go through concerning their identity, motivation, commitment and efficiency (Day et al., 2007).

With regard to continuous professional development of teachers it is relevant to study how teachers learn in these different phases, and especially what learning goals and preferences they have. Since it is generally assumed that teachers develop in their profession during their career, the theories on professional life phases help to understand this development and provide insight in teachers’ learning for each phase. For instance, beginning teachers have different learning goals than experienced teachers.

Also, from studies on effective features of professional development (Borko, Jacobs & Koellner, 2010), it can be assumed that teachers not only change their learning goals across professional life phases but also change their preferences regarding the features of professional development.

Research on how teachers define their own learning goals and preferences relate to the well-known criticism on PD-programs that teachers are not heard when it comes to developing these programs (Van Veen, Zwart & Meirink, 2012); the program does not fit the teachers own learning style nor their specific needs when it comes to their own professional development. Additionally, our study focused on how teachers articulate their own professional development preferences and their current learning goals.

In short, international studies (for example, Day et al., 2007; Fuller & Brown, 1975; Fessler & Christensen, 1992; Huberman, 1993) show that there is a meaningful relation between professional life phases and teacher learning, but this has not been studied extensively and especially a focus on teachers’ own learning goals and preferences is lacking.

Research question. What is the relationship between secondary school teachers’ learning goals, their preferences for features of professional development and the specific professional life phase they find themselves in?

Research approach. This first exploratory study needed a research design close to the context of teacher learning. In this small-scale data collection phase one secondary school was selected and teachers were interviewed. Prior to the interviews, a period of socialization and acclimatization of the first author in this particular school context was conducted. After this socialization period, 16 teachers were selected for interviews based on varied levels of years of experience, subject taught, and gender.

To study teachers’ learning and learning goals, questionnaire instruments from recent studies on workplace learning of teachers (Kwakman, 2003; Little, 2002; Zwart, Wubbels, Bolhuis, & Bergen, 2008) were used to design interview questions. Teachers learning goals
was examined by four types of questions: retrospect, future learning goals, current learning and questions related to the professional life phase scheme.

Results. With regard to evaluating teachers answers about their learning goals and preferences, it appeared that their answers were highly dependent upon a teacher’s reflective skills, sense of efficacy, and self-esteem. For example, for some teachers it was easy to look back at their acquired teaching skills from beginning till now, whereas others find it less easy to reflect on their teaching career thus far.

Although we cannot yet draw conclusions about teachers professional life phases, and we have to be careful because of our small teacher sample, it appeared that teachers with more than six years of experience were formulating learning goals in terms of ‘new challenges’. Besides, teacher learning was not solely aimed at improving their own teaching practice, also at development as a professional in the school (e.g., coaching beginning teachers, counseling students) and current issues that the school encounters (e.g., declining student results).

Finally, teachers seem to articulate their learning goals in terms of what is directly necessary for them to be confident within their classroom practice and to challenge themselves as a professional. Also, teacher learning and professional activities should be closely related to the benefits for their lessons and their students; it should improve their lessons and accordingly satisfy the students.

F11.3 How do student teachers look at their initial teacher education? Findings from an empirical study

Maria A. Flores, University of Minho, Portugal; Sandra Fernandes, University of Coimbra, Portugal; Diana Ribeiro and Patrícia Santos, University of Minho, Portugal

Abstract

The need to conceptualise Teacher Education as a ‘long continuum’ within a lifelong perspective (Marcelo 1999) has been reiterated in the literature. Within this view, Initial Teacher Education (ITE) is seen as the first step of a career-long process only preparing for entry into the profession. Induction and In-service education and training of teachers are also viewed as two crucial elements of the continuum (Bolam 1987; Marcelo 1999).

Research has also identified the challenges and experiences of student teachers in becoming teachers (see, for instance, Flores & Day, 2006; Schepens, Aelterman e Vlerick, 2009, Lamote e Engels, 2010).

Resulting of the Bologna process, ITE has been subject of a process of restructuring in many European universities as it is the case of Portuguese universities. In Portugal, ITE occurs at the level of second cycle (Master degree) and it includes: i) general educational training; ii) specific didactics (for a given level of teaching and subject matter); iii) professional practice; iv) cultural, social and ethical education; v) educational research methods, and vi) training in the subject matter.

The aim of this paper is to present findings from ongoing research on the perceptions and experiences of student teachers in regard to ITE. The research questions are: How do pre-service teachers evaluate their experience during the 2-year teaching degree (Master level) and its key components? How prepared do they feel to face teaching? How do they rate different aspects of their training program including their workplace learning?

Data were collected through questionnaires and written narratives at the end of the
programme. In total, 51 student teachers responded to the questionnaire. Out of the 51 students, 36 are female and 15 are male. Their age ranged between 22 and 55 years old. Forty-seven student teachers have written narratives about their ITE experience: 10 are male and 37 are female; their age ranges between 22 and 45 years old.

Overall, the participants state that they had a good preparation (60.8%) to make a significant difference in the learning of their students and that the teacher education programme was fair (43.1%) and good (31.4%) in their preparation to teach. Looking back on their training, most of students would enrol again in ITE: 31.4% of the students say “probably yes” and 21.6% say “definitely yes”.

By and large, the participants hold a skeptical view of their training as they rate as fair a number of key competencies. They feel that the teacher education programme was “fair” in the preparation and use of classroom research, inquiry strategies (43.1%) and inquiry methods to an effective learning environment (51%). They also rate as “fair” their preparation to accommodate students’ individual differences by adapting curriculum and instruction (45.1%), to know ways to diversify lessons to meet the needs of individual students who have disabilities (42%) and to make decisions about teaching based on classroom evidence (47.1%).

However, they are satisfied with issues such as classroom discussions (68%), exchanges with peers (64%), assigned readings (60.8%), coverage of current issues (56.9%), course assignments/projects (52.9%), and academic advising (44%). On the other hand, the students are dissatisfied with lecturers’ methods of assessment (48%) and the balance between theory and practice (39.2%).

Student teachers state that the teacher education program prepared them to reflect on and evaluate their theories of teaching (51%), to make teaching decisions based on the results of pupil assessments (50%), and to apply recent research in education (47%). As far the overall evaluation of the teaching practice, most of students (54.5%) rate it as neither a positive nor a negative experience; 36.4% of the students evaluated their teaching practice as positive and only 9.1% as negative.

The implications of the findings for teacher education are discussed in the paper. In particular, attention needs to be paid to the adequacy and coherence of the various components of the programme and the ways in which pre-service teachers put them into practice in schools. These will be explored further in the paper.
in their first year of teaching.

In undertaking this research I particularly set out to observe their literacy teaching in the first year. I wanted to know if they were receiving adequate preparation for teaching literacy in their university degree, and what could be done, both in teacher preparation and in the first year of teaching, to help them become confident and effective teachers of literacy. The personal motivation coincided with a broader social and political interest in the preparedness of teachers to teach literacy. Australia’s politicians are concerned about slipping results in international literacy testing (Thomson, De Bortoli, Nicholas, Hillman, & Buckley, 2010) and concerns about teacher education are manifesting in new standards for teaching and professional learning (AITSL, 2012a, 2012b).

The challenges of being a first year teacher have been known for a long time, and have been well documented in the literature. The key to meeting these challenges and keeping teachers in the profession is often reduced to the notion that beginning teachers must learn to make do, and to build skills that allow them to cope with the circumstances of the first year (Mansfield, Beltman, Price, & McConney, 2012). This represents a deficit approach to understanding the beginning teacher, ignoring what beginning teachers do know and can do. It also ignores the visions these teachers have of themselves and why they entered the teaching profession. This study confirmed that when we fail to take account of beginning teachers’ visions we provide misaligned supports, and run the risk of misinterpreting why teachers leave the profession, and thus proffer misguided solutions to teacher attrition.

In this paper I will present a conceptual framework for understanding this disjuncture between what beginning teachers want to do in the classroom and what they actually experience, through two Greek concepts: ‘pneuma’ and ‘pragma’. I present ‘pneuma’ [pnevma] as the spirit and vision of teaching – Korthagen (2004) has described a similar concept as ‘mission’. ‘Pragma’ is presented as the substance and practice of teaching. Teachers need to feel success linked to both the ‘pneuma’ and ‘pragma’ of teaching. Pneumatic success is linked to each teacher’s vision of self as teacher, their morals and ethics and is inextricably tied up with their original motivations for entering the profession. Pragmatic success is linked to each teacher’s capacity to manage the classroom environment, and to enact teaching practice. It is my contention based on the findings from this study that ‘pneumatic’ success has primacy, and is a pre-requisite for teachers to feel satisfied and committed to teaching. If their pneuma is unfulfilled they are likely to be teachers who leave the profession early. ‘Pragmatic’ success may be achieved, but in and of itself is not sufficient to guarantee a teacher will be satisfied and committed to teaching. Pneuma can be challenged by pragmatics. In this study, the pragmatic challenges for the participants were gaps in their knowledge for teaching literacy, particularly to diverse learners. However school and system supports did not successfully fill these knowledge gaps, and instead more often confused and frustrated the participants, leaving participants with the additional pragmatic challenge of limited supports. External performativity pressures on schools appeared to have left them with limited capacity to support beginning teachers, and the schools themselves were struggling to provide direction and knowledge in literacy teaching as school leadership responded in unpredictable ways to system pressures to increase scores on national standardized literacy tests. The study found that these pragmatic challenges should be viewed with direct reference to the individual ‘pneuma’ of each teacher. In other words, professional learning, support and responsibility
should be given in ways that align with their teaching spirit. When this does not occur, the likelihood of an early exit from teaching is increased. The paper concludes with the presentation of a structural framework which describes how such alignment can be built into teacher preparation and induction programmes.

F12.2 Teachers’ socialization in their first job: A year of micropolitical learning
Ruben Vanderlinde, Ghent University, Belgium and Geert Kelchtermans, KU Leuven, Belgium

Abstract
Problem statement. The transition from teacher education to the actual teaching professional practice is widely portrayed in the literature as a difficult and challenging career phase. Authors speak about a “praxis shock” (e.g. Gold, 1996), or describe the beginning teacher job as a “lost at sea” or a “sink or swim” experience (Ingersoll & Strong, 2011). Beginning teachers face challenges and problems with, for instance, classroom management, problems with learning difficulties of their students, technology integration problems, etc. To put more positively, the first year of a teacher’s career is also a year of intense professional learning.

Although the issue of career induction for teachers has received ample research attention, most studies have focused on issues related to classroom instructional practices. Far less attention has been given to the fact that beginning teachers also become a member of the school as an organization (Kelchtermans & Ballet, 2002). This process of socialization implies that beginning teachers have to face and develop personal relationships with the variety of actors in the school, as well as come to learn the explicit and implicit rules (about ‘territories’, hierarchy, do’s & don’ts) that are part of the school organization’s culture.

In this paper, we aim at unraveling in more detail these socialization processes, drawing on the stories of beginning primary school teachers and using a micropolitical lens to analyze them.

Conceptual framework: Micropolitics. From a micropolitical perspective schools as organizations are seen as arenas for struggle, influence, interests, and power, driven by the variety of goals, motives and concerns of the people involved (Ball, 1994). In line with this perspective, we argue that people’s behavior in schools is driven by their professional interests. Teachers have a clear idea of the necessary or desirable working conditions to do a ‘proper job’ and these working conditions operate as professional interests. When these conditions are either threatened or absent, teachers will engage in micropolitical action to safeguard, establish or restore these conditions. This is what Kelchtermans and Ballet (2002) describe as “micropolitical literacy”, making a distinction between three aspects: a knowledge aspect, an instrumental aspect, and an experiential aspect.

Method: Follow-up study of eight teachers. In a study on beginning teachers in Flanders (Belgium), we followed eight teachers over the first year of their teaching career. At four stages in this first year we administered semi-structured interviews in order to capture the induction process in a follow-up design, which is still rarely used in the study of new teachers. Furthermore, it allowed us to document and understand in detail how the eight beginning teachers developed relationships with key actors in their school organization.

Findings: Socialization and becoming micropolitically literate. The stories of our eight respondents demonstrate how they all experienced their first year as a year of intense
micropolitical learning. All of them developed a more in-depth understanding of the school as an organizational context, and, more specifically, learned about the particular agendas, concerns and interests of its members. The critical incidents, persons, and phases opened their eyes to the micropolitical reality of school life. Our study further indicates that developing micropolitical literacy is a process with different stages. Before starting their career at school, beginning teachers have already developed some knowledge of its micropolitical reality, but their literacy lacks instrumental and experiential aspects. It is a rational detached ‘knowing’. Yet, the confrontation with critical incidents, persons, and phases forces them to deal with the operational and emotional aspects. In the first few months the experiential aspect of beginning teachers’ micropolitical literacy is rather negatively colored: the schools’ micropolitical reality is completely new to them and evokes emotions of discomfort and powerlessness. Gradually, these emotions become more positive, and, at the same time, the teachers begin to develop the instrumental aspect of their micropolitical literacy as a sense of mastery (knowing how to deal with it). However, the actual enactment of micropolitical strategies didn’t occur before the end of their first year.

Additional analysis further revealed that 1) beginning teachers encountered problems with the formal power of the school board; and 2) that parents are seen as both a source of stress and recognition by the beginning teachers.

Conclusion and significance. Our study is important and relevant for optimizing teacher induction programs. The stories of these eight beginning teachers provide a strong argument to broaden the content of induction programs to include the organizational reality new teachers find themselves confronted with instead of focusing primarily on instructional issues. Close attention should be given to the development of instrumental and experiential aspects of teachers’ micropolitical literacy, and to parents and school board members as ‘significant’ school actors.

F12.3 The moderating role of “teacher self-aspect” on the relationship between difficulties and self-efficacy among novices
Christelle Devos and Léopold Paquay, Université Catholique de Louvain, Belgium

Abstract
Novice teachers are, to various extents, experiencing a range of teaching difficulties when they enter the profession (e.g. classroom management, evaluation) (Britt, 1997; Ganser, 1999; Melnick & Meister, 2008; Veenman, 1984). Yet, the extent that student teachers and beginning teachers are affected by these difficulties can vary greatly. We suggest that their reaction to the setbacks and failures is likely to be influenced by the importance that they attribute to their teacher identity. Several lines of research have suggested that giving a high importance to a given self-aspect is likely to trigger higher levels of distress (e.g. depression, lower self-esteem, lower self-efficacy) in the face of setbacks (e.g. negative life event, failure, difficulties) related to this self-aspect (e.g. Brewer, 1993; Crocker, Brook, Niiya, & Villacorta, 2006; Lindwall, Aşçi, Palmeira, Fox, & Hagger, 2011; Pelham, 1995).

In this paper, we tested the hypothesis that the novices for whom being a teacher is a central part in their self-concept are more destabilized by the teaching difficulties and therefore experience a stronger decrease in their self-efficacy beliefs.

Method. This hypothesis was tested in two longitudinal studies conducted with Belgian
student teachers during their first internship (N = 124) and beginning teachers during their induction period (N = 110). At Time 1, which took place before the first internship (Study 1) or before the induction period (Study 2), we measured a self-efficacy baseline and self-aspect importance. At Time 2 (i.e. after the first internship in Study 1 or after the first months of teaching in Study 2), we measured participants’ self-efficacy with identical items than at T1, as well as the extent that student teachers considered their first internship as a failure (Study 1) or the level of difficulties that beginning teachers were experiencing (Study 2). We also controlled for the influence of age, gender, level of teaching, and school SES. All scales display good psychometric properties.

Results. Study 1: Student teachers facing their first internship
A regression analysis showed that the interaction between failure experience during the internship and self-aspect importance was a significant predictor of the change in self-efficacy (β = -.31, p < .01; Δ R² = 7.7%) beyond the main effect of these variables and the control variables. Simple slope analyses confirmed this interaction effect. The slope of failure experience was found to be non-significant at low levels of importance (B = -.09, p = .06), but strongly significant at high levels of importance (B = -.34, p < .001).
All the participants who reported a low level of failure experience experienced an increase in their self-efficacy beliefs following their first teaching experience. Contrastingly, among the participants who reported a high level of failure experience, those who attributed a low importance to their student teacher role experienced nearly no change in self-efficacy, whereas those who attributed a high importance to it experienced a decrease in their self-efficacy.

Study 2: Beginning teachers facing their induction period
As in Study 1, the interaction between teaching difficulties and the importance of the teacher self-aspect was statistically significant (β = -.22, p < .05; Δ R² = 4.3%). The slope of teaching difficulties was found to be non-significant at low levels of importance (B = .06, p = .046), but strongly significant at high levels of importance (B = -.17, p = .03).
Among the novices reporting little teaching difficulties, both low- and high-importance participants experienced very little decrease in their efficacy beliefs between T1 and T2 (Δ = -.11 and -.14 respectively). However, if facing a high level of difficulties, high-importance participants experienced a stronger decrease in self-efficacy (Δ = -.48) whereas low-importance participants displayed no change in their efficacy beliefs between T1 and T2 (Δ = -.002).

Discussion. In sum, these two studies showed that the participants who assigned a high importance to their student teacher or teacher self-aspect reported a stronger decrease of self-efficacy in the face of failure experiences. These findings increase our understanding of the processes at play during the induction period, and open new directions of research.
**Session number:** F13  
**Location:** Room 3C  
**Time:** 11.00 – 12.30

**Rhetorical perspectives on education, culture and society**

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<th>Paper presentations</th>
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| **F13.1** Education as rhetoric: Introducing a “perspective about perspectives” in teacher education  
Kris Rutten, Ghent University, Belgium |
| **Abstract**  
During the second half of the twentieth century we have been confronted with different but related turns in the humanities and social sciences: linguistic, cultural, anthropological/ethnographic, interpretive, semiotic, narrative, ... All these turns recognize the importance of signs and symbols in our interpretations of reality and more specifically the cultural construction of meaning both through language and narratives. This paper introduces insights from contemporary rhetoric (or new rhetoric) to explore how an understanding of education as rhetoric can be integrated into the teacher education curriculum. The focus is on the work of the rhetorician and literary critic Kenneth Burke [1897-1993], specifically on his theory of dramatism and the concept of perspective by incongruity. The dramatistic pentad is introduced as a tool for a rhetorical analysis of educational practices. In a case study, the rhetoric of culture and arts education is analysed in a pre-service teaching course by applying the dramatistic pentad to study a fictional narrative. It is claimed that approaching education as rhetoric helps to understand the ambiguities and complexities that are at play in educational practices and that such a ‘perspective about perspectives’ can be a basis for exploring teacher education at the intersection of the semiotic, narrative and rhetorical turn. |
| **F13.2** Literature teaching: Narrative, bildung and the teacher’s role  
Geert Vandermeersche, Ghent University, Belgium |
| **Abstract**  
One of the defining issues of literature education remains the persistent debate on the function and value of (literary) reading, in which both ideals and goals of teaching literature (e.g. Bildung as a guiding concept) and the dominant medium of the print book are being questioned. Whether discussed in terms of crisis or not, the basic terms of the debate persist (see Vandermeersche & Soetaert, forthcoming): Should teachers aim for shared knowledge of a canon of books or embrace the diversity of cultures, literacies and media? Should education train students for the job market or aim for the (less quantifiable) ideals of the critical citizen or the cultivated individual (i.e. the ideal of the gebildete mensch). Most importantly, for teacher education, what is the role of a "good" teacher; which "standards of excellence" do we put forth for literature education? Inspired by the narrative turn in the social and human sciences, we place narrative at the centre of our exploration of literature teaching, both narrative as a textual discourse and as a mode of thought (Bruner 1986). Often "standards of excellence" are represented in narratives: in the past, teachers and pupils could think about their educational roles through the Bildungromans, school and academic novels they read. Influenced by multiliteracies (New London Group, 1996) and cultural studies (Soetaert 2005), we see teaching, teacher education and educational research as multitextured (Beach et al. 2011), |
which leads us to examine a wide range of texts and media, and the ways in which texts can be linked to educational practice and students' lives. As such we stress "essential questions ... that organize disciplinary conversations" (Smith & Wilhelm 2010, p. 9), such as "why read?", "why books?", across genres, texts and media (also see Beach, Appleman, Hynds and Wilhelm 2011). The central research question of this paper is whether narrative representations of education (novels, movies, graphic novels, ...) can provide a complement to an "evidence-base about teacher quality", by helping us reflect on "good" education? Following Richard Rorty's "turn toward narrative", we posit that fictional narratives can offer clarifications of the goals of literature education, as they are represented and legitimated in (popular) narratives. The representation of teaching and literary culture in novels (Defoe's Robinson Crusoe, Jones' Mister Pip, Wolfe's Old School, Pennac's School Blues), movies (Dead Poets Society, The History Boys) and graphic novels (The Unwritten) can function as tools for thinking about education. We research the ways in which our student-teachers learn from these narratives? Teachers' (professional) identities can be (re-)conceptualized through Paul Ricoeur's narrative identity, or as “a self instructed by cultural symbols, the first among which are the narratives handed down in our literary tradition” (1991, p. 33). In our classes, we ask student-teachers to talk about essential themes of their profession through the detour of these narratives. As Elaine Showalter remarks in Teaching Literature (2003), (narrative) fiction offers “a self-reflexive aspect” to literature teachers. The lesson could be that “[w]e are not only the authors but also the classroom narrators of our courses” (94). As such we also take up Kieran Egan's suggestion to view lessons “as good stories to be told rather than sets of objectives to be attained” (1989, p. 2). In conclusion, we argue that in thinking about excellence and the roles of the teacher within literature education we can move toward a narrative understanding of curriculum, teaching and research.

F13.3 Rhetorical perspective on culture, literacy and education
Ronald Soetaert, Ghent University, Belgium

Abstract
In my presentation, I will start with a rhetorical analysis of the educational debate about literacy and culture and I will suggest a rhetorical perspective in teacher education as a meta-perspective for overcoming simple dichotomies.

Rhetorical reconstruction. From the perspective of education the concept of culture is often combined with literacy. The combination cultural literacy has become a buzzword in the 1980s, mainly inspired by the alleged lack of it. Meanwhile the at-risk trope has become widely spread: (Western) civilization, humanities, culture, universities, youth, etc. are all said to be at risk or in crisis.

The back-to-basics movement was coined and trumpeted as an answer to major problems in education and society. The rhetorical perspective becomes clear: if we agree that there is a crisis and that civilization is at risk, then there is need for a remedy. E.D. Hirsch referred to cultural literacy to describe the level and breadth of knowledge citizens need to navigate in society. This cultural conservatism is based on a “shared” cultural heritage. Inevitably, such a list creates a dichotomy between what is and what is not listed. From an educational perspective another dichotomy is created: content versus skills, the what versus the how.

In the same decade when Hirsch published his Cultural Literacy, other research approached literacy from a different angle by describing it as a social practice embedded in the specific
context of the language user(s). During a conference in New London in 1994, a group of researchers developed a number of ideas published in a manifesto under the umbrella of the new concept multiliteracies: “a word we chose to describe two important arguments we might have with the emerging cultural, institutional, and global order: the multiplicity of communication channels and media, and the increasing salience of cultural and linguistic diversity” (New London Group 63). These ideas were deeply influenced by linguistic perspectives, mainly by Critical Discourse Analysis. Multiliteracies also tries to answer what is happening in our network society: globalization and digitization.

Another major influence came from Cultural Studies, described as inter-, multi-, and even counter- or anti-disciplinary. Perspectives from Cultural Studies are embedded in a lot of other disciplines: from literary theory to media and communication studies, from art criticism and theory to the sociology of culture, from philosophy to cultural anthropology/ethnography. If culture can be conceptualized variously as ‘a way of life’, as cultivation of the mind or as learnt behaviour it also becomes also clear that culture and education share some major perspectives. Culture is intrinsically pedagogical. Culture is both the sphere in which adults exercise control over children and a site where children & youth can resist the adult world and create their own cultures and identities. Culture is the ground of socialization, of accommodation and contestation, of identification and difference.

Rhetorical perspectives. In the second part of my presentation I suggest alternative perspectives on the curriculum by introducing the contact zone (Pratt) as a major concept inspired by comparative cultural studies. The pedagogical implications are a shift from elitist culture to culture as a whole way of life, from theory to narratives, from one Grand Narrative to multiple narratives, from a single literacy to multiliteracies, from stability to change, from product to process.

This kind of teaching also involves new perspectives on the identity of the teacher. Teachers have to test everything they more or less take for granted, namely their discipline, their subject content, their role as a teacher and last but not least, their own identity. Teachers should be willing to reconstruct discourses, to revise vocabularies. In an educational environment based on comparative cultural studies the teacher should be — as Seymour Papert argues — an anthropologist. This perspective is very close to Richard Rorty’s central idea that if the world and our identity are not constant, we are obliged to ‘rediscribe’ it constantly (Contingency). Therefore we need what Kenneh Burke calls ‘symbol wisdom’ or what Wayne Booth described as ‘listening rhetoric’.

Pleading for the importance of a rhetorical turn (as a perspective on other turns and disciplines) is based on the idea that we all have become a kind of “homo rhetoricus” becoming self-conscious about how language constructs reality. Such a perspective implies a particular meta-perspective synthesized by Kenneth Burke as: “a way of seeing is also a way of not seeing” (Burke 1935, 49). I will illustrate the implementation of a rhetoric perspective with examples from our practice and research in teacher education.
DISCUSSION ROOMS

Session number: G1  Location: Room 3D  Time: 09.00 – 10.30

Analysing longitudinal qualitative data based on semi-structured interviews with teachers
Anna van der Want, Perry Den Brok, Douwe Beijaard, Eindhoven University of Technology, The Netherlands and Mieke Brekelmans, Utrecht University, The Netherlands

Abstract

In this contribution we focus on ‘teacher-student relationships’. Positive relationships with students are central to teachers’ self-efficacy, well-being and ability to teach (Day, et al., 2006). In combination with other roles, establishing and maintaining a good interpersonal relationship with students strongly influences a teacher’s professional identity (cf. Beijaard, Meijer & Verloop 2004; Beauchamp & Thomas, 2009; Beijaard, 1995). In line with Burke and Stets (2009) this role can be called the teacher’s interpersonal role identity (TIRI). They define identity as ‘the set of meanings that define who one is when one is an occupant of a particular role in society, a member of a particular group, or claims particular characteristics that identify him or her as a unique person’ (p. 3). In our research on the development of TIRI during the career we study the meanings individual teachers give to specific interpersonal situations (i.e. their perceptions and appraisals of these situations) and how they relate these meanings to their interpersonal identity standard (i.e. their frame of reference). This interpersonal identity standard is a powerful basis for the way teachers perceive and appraise interpersonal situations, in turn these situations may also influence and change that interpersonal identity standard.

This study answers the following question: How do teachers appraise and make meaning of specific interpersonal classroom situations during their career and how is this meaning making related to their interpersonal identity standard?

To answer this question, a model was developed that guided the analysis of empirical data (from video-stimulated in-depth interviews) from 30 secondary school teachers (12 novice, 9 mid-career, and 9 late career teachers), discussing a total of 90 fragments (three per teacher) of interpersonal situations (lesson starts, situations in which positive student behavior occur, and lesson disturbances by students). Every teacher was interviewed on a yearly basis during three consecutive years (Spring 2011 to 2013). The interview was semi-structured and video-stimulated. During the interview, the respondent was asked to describe and evaluate his/her relationship with students in general (identity standard). In addition, the respondent was asked to select a few fragments from the video, to watch the fragment and to appraise it.

For the analysis of the interview data a category system was used developed based on our theoretical framework to categorize appraisals (Lazarus & Folkman, 1984), identity standards (Burk & Stets, 2009) interpersonally (Wubbels, Brekelmans, Den Brok, & Van Tartwijk, 2006). Considering the appraisal process, the distinction benign-positive (1), stressful (2) and irrelevant/neutral (3) was used to map the emotions being part of the teachers appraisals of the situations (Lazarus & Folkman, 1984). The Model for Interpersonal Teacher Behavior (MITB, containing the categories leadership, helping/friendly, understanding, student freedom, uncertain, dissatisfied, reprimanding, strict) was used to map the meaning the teachers gave to each situation and their interpersonal identity standard (Burke & Stets, 2009; Wubbels, Brekelmans, Den Brok, & Van Tartwijk, 2006). In the discussion room I will present the method of analysis and (first) results. Next to that, I would like...
to discuss how to define and measure development (or change / stability) over three years with this type of qualitative, longitudinal data and how to compare the different career groups involved in my study.

## SYMPOSIA

<table>
<thead>
<tr>
<th>Session number: G2</th>
<th>Location: Room 1B</th>
<th>Time: 09.00 – 10.30</th>
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<tbody>
<tr>
<td>Symposium</td>
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<tr>
<td>Career-long teacher education</td>
<td>Chair/organizer(s): Christine Forde</td>
<td>Discussant: Beth Dickson</td>
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**Abstract**

This proposal is for a joint symposium between the University of Glasgow and the General Teaching Council Scotland, the professional body for teachers. The focus of this symposium is on the issue of the enhancement and sustaining of the pedagogic practice of teachers over a lengthy career – often over forty years. One of the starting point of this symposium is the current programme of reforms in Scotland relating to teacher education and continuing development. As a result of a recent review of teacher education in Scotland, Teaching Scotland’s Future (Donaldson, 2011), the idea of ‘career-long teacher education’ has come into the policy lexicon and as part of the response to this report a Framework for Career-Long Professional Learning (GTCs, 2012a) has been developed and a programme for professional update - professional reaccreditation (GTCS, 2012b) – has been established. A second starting point is an ongoing research and development programme on the development of accomplished teaching. The Symposium will consist of four interlinked papers. These papers will explore different dimensions of career-long teacher education including models of continuing professional learning, use of professional standards, defining career long teacher education and professional re-accreditation.

### G2.1 Models of continuing professional learning

Rosa Murray, General Teaching Council Scotland, United Kingdom

**Abstract**

In educational policy, the ongoing professional learning of teachers is constructed as a ‘good thing’, as a mark of current definitions of professionalism and is regarded as the key to both the improvement in terms of raising pupil achievement and systemic change across a national educational system. Currently in Scottish education there is a tension between an expressed policy ambition to have a ‘masters level’ teaching profession and a historical orientation towards privileging experiential and short term professional learning opportunities. However now there is a move to create a process from early phase career development to the development of senior experienced practitioners. This paper will analyse current approaches of teacher learning which are being advocated as a result of the Donaldson Review (2011) and propose a model of career long professional learning that integrates knowledge building and generation and the development of practice.
| G2.2 | **Do standards have a place in professional learning?**  
Margery McMahon, University of Glasgow, United Kingdom and Rosa Murray, General Teaching Council Scotland, United Kingdom |
|---|---|
| **Abstract**  
This second paper will reflect on the development and use of professional standards in teaching in Scotland. The paper will consider some of the significant criticisms of standards but will also consider their use in professional learning and practice. The first set of standards were introduced into Scottish education in 1992 and this provoked considerable concerns about the possibilities of a reductivist and technicist construction of the nature of teaching. Since then professional standards were generated individually to cover specific aspects such as initial teacher education and registration, chartered teacher status and headship. In succeeding revisions of these standards a more integrative construction of the nature of professional practice has been generated with practice underpinned by knowledge, understanding, values and personal commitment as well as personal and interpersonal abilities. However, there was a lack of coherence across standards, limited engagement by the profession and as a result of the Donaldson Review, a review of the full suite of professional standards for teaching was developed. The paper will conclude by outlining the model of professional standards now being used in Scottish education. |
| G2.3 | **Defining career-long professional learning**  
Margery McMahon, University of Glasgow, United Kingdom |
| **Abstract**  
Career long teacher education cannot be conceived of as a linear process: there is no single process or typical career trajectory that could be identified. Instead it is important to recognize the non-linear and sometimes fluctuating nature of teachers’ careers. A career long approach to teacher education and the development and sustaining of accomplished teaching requires commitment and participation from all with the strengthening of existing partnerships and the establishment of new partnerships. Building capacity at school level will foster knowledge exchange between practitioners and researchers and ground practice securely in theory and practice. This process would also strengthen research and its roots in the profession. The question then is how do you provide a framework for career long professional learning. This paper concludes by examining the principles underpinning the design and content of the Standard for Career-Long Teacher Education. |
| G2.4 | **Professional update**  
Rosa Murray, General Teaching Council Scotland, United Kingdom |
| **Abstract**  
In 2011 the GTC Scotland was tasked by the Scottish Government to introduce a system of teacher re-accreditation. In response the GTC Scotland have developed a process entitled Professional Update (GTCS, 2012), which places professional learning and Professional Review and Development at the heart of the process. This paper explores the principles underpinning the development of the teaching profession in Scotland and considers why Professional Update is becoming a central concern of teacher policy in international contexts. |
## PAPER PRESENTATIONS

### Session number: G3  
**Location:** Auditorium 1  
**Time:** 09.00 – 10.30

<table>
<thead>
<tr>
<th>Symposium</th>
<th>Chair/organizer(s): Cheryl Craig</th>
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<tr>
<td>New regions (Anniversary book strand theme)</td>
<td>Discussant: David Goodwin</td>
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**Abstract**

In this symposium, a variety of opportunities and challenges will be presented through the lens of those representing ISATT’s new regions. The issues include matters having to do with history, change, teacher learning, teachers’ emotions, teacher transformation, assessment, accountability, hegemonies of knowledge, and the need for culturally appropriate research methods, among other related themes. These matters play out in complex, local environments, frequently plagued with a scarcity of resources. In the presentations, special attention will be paid to poverty, English as a Foreign language, global competition and the need to balance history and culture with internationalization and “the wheels of progress.”

| G3.1 | **Back to the future**  
Yang Xiaohong, Hangzhou Normal University, China |
| G3.2 | **Employing history to understand and promote teacher change**  
Tara Ratnam, Independent Teacher Educator and ELT Consultant, India |
| G3.3 | **Teachers’ emotions between classroom assessment and accountability demands**  
Carola Steinberg, University of Witwatersrand, South Africa |
| G3.4 | **Tensions between Eastern (new region) indigenous knowledge perspectives and Western “research intensive” knowledge perspectives: The case of the STEM (Science, Technology, Engineering, Mathematic) disciplines**  
Samuel Oyoo, University of Witwatersrand, South Africa |

### Session number: G4  
**Location:** Room 1A  
**Time:** 09.00 – 10.30

<table>
<thead>
<tr>
<th>Paper presentations</th>
<th>Chair: Geert Devos</th>
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<tr>
<td>Developing leadership competence</td>
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| G4.1 | **Developing leader behaviours among students of educational leadership**  
Martin Thomas, Notre Dame Institute of Education, Pakistan and Margaret Madden, Australian Catholic University, Australia |

**Abstract**

Educationists have been showing considerable interest in knowing factors affecting leader effectiveness (Robert, 2012). Leader behaviours are considered one of the important predictors of leadership effectiveness (Judge & Piccolo; Judge, Piccolo, & Ilies, as cited in Derue, Nahrgang, Wellman, 2011) as they have a great influence on employees’ attitude, behaviours, emotions, morale and perception (Momeni, as cited in Holloway, 2012). Consequently, leader behaviours channel the creation and maintenance of a positive, thriving organizational climate (Holloway, 2012). Webb (2007) found that workers are motivated to extra effort when leaders exhibit confidence, high energy, personal conviction, power and assertiveness while Tabbodi and Prahallada (2009) indicated how
leader behaviours impact significantly on staff’s efficacy. Employees, particularly those extrinsically motivated, associate their satisfaction with their supervisors (Robert, 2012). Researchers have identified various leader behaviours (Derue, Nahrgang, Wellman, 2011; Folkman, 2010; Fleishman et al., as cited in Derue, Nahrgang, Wellman, 2011) which can be categorized in two main groups, namely initiating structure behaviour and consideration behaviour, both of which bring employee satisfaction (Robert, 2012; Hamid, Rahman, & Nor, 2012). Where job stress is concerned, consideration leader behaviour has been shown to produce a negative impact whereas initiating structure can have positive effects on job stress levels (Jam, Akhtar, Haq, Ahmad-u-Rehman, Hijazi, (2010). In the final evaluation, the effectiveness of leader behaviours or styles is the demonstrated ability to balance both the achievement of the goals or outcomes and concern for the employees (Blake and Mount as cited in Bolden, Gosling, Marturano, & Dennison, 2003).

This experimental research was explored the extent to which the participation in a course unit of the Educational Leadership Programme, offered by the Notre Dame Institute of Education (NDIE), Karachi, Pakistan, developed the required leader behaviours among the Postgraduate or Master level students. Edwin, A. Fleishman’s Leadership Opinion Questionnaire (as cited in Pierce & Newstrom, 2005) was used for the pre-test and the post-test. Participants of the research were twenty eight (28) Postgraduate or Master level (PgCert/MEdLead) students who undertook the Perspectives of Leadership unit. It was expected that the this unit would not only help students to build the strong knowledge base and acquire certain leadership skills (Kartz, as cited in Kamble, 2011; Kamble, 2011) but also develop appropriate behaviours which would prepare them to cope with the scope of the challenges which face them as well as create or maintain a positive, thriving organizational climate in their schools (Holloway, 2012). Contrary to expected outcomes, the research revealed surprising results as unit participants exhibited relatively weak orientation towards both initiating structure and consideration leader behaviours. The research has challenged the legitimacy of the approaches used to teach the course.

G4.2 Preparing school leaders for the 21st century: An efficacy scale to stimulate self-reflection
Wendy Moran and Roger Vallance, Australian Catholic University, Australia

Abstract
School leaders are required to meet the expectations of parents, students, teachers, community and the various bodies associated with accreditation, registration, curriculum and the systems within which they work. Undertaking such demands requires school leaders of the 21st century to acquire and retain distinct skills and qualities that include: social and interpersonal skills, the ability to translate vision into reality, and being knowledgeable about current pedagogical trends, to name just a few. In Australia, the Ministerial Council for Education, Early Childhood Development and Youth Affairs (MCEECDYA) (the governmental body in Australia responsible for accreditation for teachers at all levels) sets an integrated standard by which principals of schools may be measured. Hence, prior to an appointment as a school leader, those who desire a leadership position need to seek and undertake targeted professional development that will enable them to competently address these requirements and practices in their own educational systems and governing bodies. Potential and current school leaders may profit from using a tool...
that will aid their reflection and focus their professional learning for future appointments. This paper describes the developmental process of the Efficacy Scale for School Leaders (ESSL) (Vallance, Moran and Moran, 2012) intended to assist potential and current school leaders in determining the areas of leadership in which they are efficacious and those in which they are not. A systematic review of educational leadership literature (York-Barr & Duke, 2004) was used as a basis for determining the leadership domains needed by school leaders. Further international research supplemented and validated the domains presented in the systematic review and from these findings the items in the scale were formed. The items were then aligned to the conceptual framework presented in the Australian Professional Standard for Principals (MCEECDYA, 2011) acting as a further method of validation and providing Australian school leaders with a dedicated tool that would assist them to isolate areas of need in meeting their own required standard. Hence, the conceptual framework of this efficacy scale has drawn from both international school leadership literature and the Australian Professional Standard for Principals. The result is a 56 item scale measuring the following school leadership domains as set out by MCEECDYA (2011): 1) vision and values; 2) knowledge and understanding; and 3) personal qualities and social and interpersonal skill; 4) leading teaching and learning; 5) developing self and others; 6) leading improvement, innovation and change; 7) leading the management of the school; and 8) engaging and working with the community. Optional items to assist school leaders working in religious schools are also available. The scale can be used for personal reflection or, if using a 360-degree approach to evaluation, it can further inform the user of how others see them and where there may be disconnect between their own view of themselves and the perceptions of others with whom they work.

The ESSL has been piloted and refined with a number of school leaders in the Sydney region (N = 107) during their professional development meetings. Data collection is continuing via a newly constructed website where school leaders can undertake the scale and immediately receive their personal scores for each of the leadership domains. Aggregated efficacy scores of all participants are updated on the website monthly so that participants can compare their scores with the previously collected data. Results from the scale development process to date have shown that the items are performing well and consistently. Items showing low reliability have been removed from the scale. Participants who undertook the scale in person during professional development meetings were also invited to provide feedback regarding the usefulness of the tool for themselves as leaders, and for use with their executive team at school. Results have been encouraging suggesting that school leaders find the ease and simplicity of the tool a valuable feature to assist with identifying individual and collective areas in need of professional development and growth.

G4.3 Diaries as a means of self reflection: School administrators in practice
Ozge Hacifazlioglu, Bahcesehir University, Turkey

Abstract
Graduate studies are likely to be places helping teachers and administrators to voice their situations if the university environment offers a safe place for speaking out and for elaborating one’s knowledge of the practice (Elbaz and Luwisch, 2010). Clandinin and Connelly (1996) introduced the term “cover stories” to reveal the ways in which teachers and administrators talk publicly about their work, their beliefs and actions. Richardson
(1994), Clark (2001), Craig (2003) and Elbaz and Luwisch (2010) showed that writing could be a powerful tool in the professional development of teachers as well as school administrators. The main purpose of this paper is to explore the ways in which diaries could be used as a tool for professional development of school administrators. The study sought answer to the following research question: “How are school administrators different, in mind, morale, and behavior after weeks and months of keeping diaries?”. 30 school administrators (principals and deputies) constituted the research group in this study. All the participants are master students in Educational Leadership Program, also working as administrators at the schools in Istanbul, Turkey. Each administrator kept his or her diary for one year. School administrators were asked specifically on bringing forward memories from their current lived experiences. They were expected to reveal their experiences that they find interesting and valuable to share for each week. Total 340 stories were collected and they were analyzed by using content analysis. Depending on their preference, school administrators were asked to share their experiences with their classmates in focus groups. In some cases, where the participants were reluctant to share a special story, it was kept confidential for the researcher. School administrators were asked the following questions during post reflection exercises: “Who are you as an administrator after considering this experience? What new quality would you like to bring to your work?”. Almost all the participants were aware of the value of the reflective processes in their diaries although most of them were not eager to write down their experiences during the first few weeks. Most of them said it took them at least 6 weeks to understand the value of writing through self reflection. It was revealed in the study that conversation groups also worked as a “medium of support, advice, sense making and encouragement for administrators to learn how to serve their students”, teachers, parents and the community better (Clark, 2001). Almost all of the administrators said they will continue the writing process in their future careers.

Session number: G5  
Location: Auditorium 4  
Time: 09.00 – 10.30

**Paper presentations**  
Chair: Geert Kelchtermans

**Life, identity and scholarship of teacher educators**

**G5.1 Who teaches our teachers? A study of teacher educator characteristics, identities and professional perspectives**
Brad Olsen, University of California, United States

**Abstract**
This paper will report on a multiple-methods study of 25 contemporary California teacher educators. More specifically, the study responded to four sub-questions by analyzing five kinds of data:
- Who are California’s teacher educators? (demographic characteristics)
- How did they come to enter teacher education? (reasons for entry, prior work and career paths in education, formal preparation experience)
- What are their educational philosophies and professional identity characteristics? (beliefs, perspectives, practices, and identity profiles)
- How are they selected, trained, and supported in their work—especially within the current policy climate? (contours of the profession; conditions of their work)
Conceptually, the study relies primarily on professional identity theory. This analytical frame highlights educators as both sociocultural products and active agents (Author 2008, 2011). A teacher educator’s professional identity is a complex mélange of influences and effects in which macro- and micro-social histories, contexts, positionings, and professional training combine with the uniqueness of any individual person to create a situated, ever-developing self that both guides—and results from—experience. Professional identity theory is a useful, innovative methodology for investigating how past, present, and future—and both personal and professional experience—intertwine into complex ways of learning, practice, and professional growth in the lives of teacher educators.

Employing identity theory, sociolinguistics, and ethnographic methods, the study analyzed the collected data, producing a holistic treatment of the teacher educators, their career contours and processes of development, and their professional identities and practices. For example, the paper will discuss influential inter-relationships among a teacher educator’s prior work in education, her reasons for entering teacher education, and the kind of teacher educator she has become. Another finding relates to difficulties that teacher educators experience as they negotiate tensions between their role as educators of teachers, on the one side, and the various publishing and promotion expectations at their university, on the other. A third finding focuses on ways that these teacher educators constructed complex, often contradictory, views of their professional selves against the backdrop of teacher education amid current political/policy climate for preparing teachers in the US. The paper discusses these findings and more, and presents implications for both teacher educator practice and research.

G5.2 A case-study of teacher educators’ scholarship: Biography, workplace and pedagogy
Eline Vanassche and Geert Kelchtermans, KU Leuven, Belgium

Abstract
Despite teacher educators’ responsibility for preparing competent and qualified teachers for the future, there has been little attention to what teacher educators need to know and how they develop that knowledge for teacher education. The implicit assumption is that educating teachers is a natural extension from being an experienced classroom teacher, or a knowledgeable expert in a subject discipline (e.g. physics, mathematic), and that the expertise of the former role will automatically carry over to one’s work in the latter (Zeichner, 2005).

Party prompted by this observation, the Association for Dutch Teacher Educators (VELOF/VELON) in the Netherlands developed a set of professional standards describing the professional expertise of teacher educators and an accompanying procedure for self-assessment, professional development, and accreditation (a.o. Koster & Dengerink, 2001; VELON, 2012). Their approach is similar to that of the Association of Teacher Educators (ATE) in the US which has developed a list of nine standards demonstrated in the practice of ‘accomplished’ educators (ATE, 1996). Furthermore, one of the most rapidly developing bodies of research in teacher education is teacher educators/researchers inquiring into their own practice, the so-called self-study research. Berry (2004), for example, carefully documented and articulated her developing pedagogy as a biology teacher educator and the life histories of former classroom teachers who left positions in elementary or
secondary schools to become a teacher educator are reported (a.o. Kitchen, 2005; Dinkelman, Margolis & Sikenga, 2006; Bullock, 2009; Williams & Ritter, 2010).

Each of these examples –although representing fundamentally different orientations- reflects the need and bourgeoning interest in documenting the distinctive knowledge teacher education requires, and probing measures to deliver the institutional-organizational support necessary to develop that knowledge. This paper is related to and aims to push forward this evolution. The strategy we adopt is zooming in on the content of teacher educators’ professionalism as this becomes visible in (and develops through) the learning process of one teacher educator, given the pseudonym John, involved in a collaborative self-study project. John is an experienced teacher educator in his late fifties teaching in the first and third year of a three year bachelor program in teaching. Using a self-study methodology, he researched his own practice to articulate and question his personal pedagogy of teacher education, while simultaneously, informing the scholarship of teacher education through his research. After briefly describing the research context of our study, we highlight the stages John went through as he was grappling with the complexities and challenges of researching his practice. We use the notion of ‘professional learning journey’ (Jasman, 2010; Shteiman et al., 2010) as an analytical framework to structure and describe John’s experiences throughout the sequential phases of his journey in the project which could be labeled as: detached, neutral, disturbed practice and self, awareness of the possibilities, reframed practice and self, withdrawal. In doing so, we provide an exemplary account of the complex, situated, personal nature of teacher education practice.

In the second section of the paper, we push the analysis a step further in arguing that John’s case opens up perspectives for a conceptualization of teacher education as enacted scholarship. This notion is based on two central premises which will be elaborated and illustrated with fragments from John’s journey. Our first premise is that John’s journey makes clear that when conceptualizing the scholarship of teaching, we better not think in terms of rational, context-independent competencies, but we need to attend to the entanglement of individual and context. The notion refers to the situated (contextualized) and interactive nature of teacher educators’ professionalism, both in time (professional biography) and in place (the material, cultural, institutional context of the teacher training institution), which ultimately manifests itself in the actual pedagogical practices and their rationale. This brings us to our second premise that John’s story learns that the question of scholarship in teacher education is not only a question of (technical) knowledge, skills, and attitudes, but needs to be conceptualized and analyzed as ‘enacted’, i.e. only in the enactment in pedagogical practices this scholarship becomes visible, and hence can be critically questioned, c.q. developed.

We conclude the article by reflecting on a ‘curriculum’ (content and pedagogy) for educating teacher educators based on a conceptualization of teacher education as enacted scholarship.
Can mobile technologies mobilize teaching and learning? An exploratory study of teachers’ thoughts and practices concerning the use of tablet PC’s in vocational secondary schools

Natalie Pareja Roblin, Jo Tondeur, Johan van Braak, Ghent University, Belgium; Griet Mathieu, Bram Bruggeman, Het Perspectief, Belgium; Joke Voogt and Petra Fisser, University of Twente, The Netherlands

Abstract

Introduction. “Advances in the use of tablets in education will be driven not primarily by technology features, but rather by instructional models that reflective educators develop and share with their peers” (Roschelle et al., 2007, p. 47).

There is a growing awareness that educational institutions need to move towards new forms of teaching and learning that enable students to develop the competences required to actively participate in the so-called knowledge society. These competences – commonly referred to as 21st century skills – include the ability to use different types of digital media, to collaborate, to think creatively, and to communicate effectively (Silva, 2008; Voogt & Pareja Roblin, 2012). Research suggests that mobile and wireless technologies (e.g. smartphones, handheld computers, tablet PC’s) can play an important role in supporting the development of such competences by providing enhanced opportunities for collaboration, for creating and/or sharing (multimedia) products, and for exploring emergent literacies (Herrington et al., 2009; Oakley, Pegrum, Faulkner & Striepe, 2012).

While an increasing number of schools around the world are investing in tablet PC’s to introduce them in the classroom, there is - yet - little empirical evidence on their value for teaching and learning. Research on the educational use of tablet PC’s is relatively new and is primarily focused on students’ motivations and attitudes toward mobile devices (for an overview see Hwang & Tsai, 2011). The current study aims at providing a first step in complementing these efforts by focusing on teachers’ perspectives. With the ultimate aim of distilling general considerations about the educational use of tablet PC’s and its implications for teacher professional development, it features in-depth analysis of teachers’ thoughts and decisions as they explore the pedagogical possibilities of tablet PC’s in their teaching practice. More specifically, we closely examine (a) teachers’ perceptions about the affordances and limitations of tablet PC’s for teaching and learning, (b) teachers’ decisions concerning the use of tablet PC’s in their instructional practice, and (c) the various factors (e.g. school policy, support, infrastructure) influencing these decisions.

Methodology. To trace teachers’ thoughts and decisions concerning the use of tablet PC’s, a multiple case study approach was adopted. Case studies allow for the empirical investigation of a phenomenon within the context it occurs, thereby contributing to uncover significant factors associated to this phenomenon (Yin, 2003).

Eleven teachers from three purposely selected vocational secondary schools in Flanders participated in this study. Each school constituted one case, and the participating teachers the units of analysis. Data sources included classroom observations, recall interviews, and focus group discussions. Classroom observations provided detailed information about how
teachers used tablet PC’s to support their instruction (e.g., learning activities, teacher and students’ roles, interaction). Recall interviews were used to uncover teachers’ decisions concerning the use of tablet PC’s and the various factors (e.g., school policy, support, infrastructure) influencing these decisions. Finally, focus group discussions allowed for the collection of teachers’ thoughts about the affordances and limitations of tablet PC’s for teaching and learning.

Data analysis followed a multilayered process. First, data was analyzed separately for each teacher, and then compared with the data from other teachers within the same school in order to identify common themes. This resulted in a case portrait that synthesized the main findings for each school. Finally, results from the three participating schools were submitted to a cross-case analysis where similarities and differences were sought through constant comparisons (Denzin & Lincoln, 2000).

Findings & Conclusion. Results reveal that teachers used tablet PC’s primarily to support student-centered learning activities by actively engaging students in the development of knowledge products (e.g. mind maps, comics, interactive presentations). Teachers reported that the main advantages of tablet PC’s were related to the opportunities they provided to have quick access to information, to offer immediate feedback, and to engage students in multiple types of learning activities. Most teachers additionally reported that tablet PC’s facilitated the development of competences which normally do not receive much attention in the curriculum (e.g. creativity, communication and digital literacy). Perceived limitations of tablet PC’s were primarily related to (a) technical and organizational issues (e.g. internet connection, 1:1 access, logistics), (b) the selection of suitable apps (e.g., alignment with content and goals, costs, language), and (c) time (e.g. to plan, to cover the curriculum).

School policies, student characteristics and availability of (suitable) apps appeared to be significant factors influencing teachers’ decisions. Results from the recall interviews are expected to provide more nuanced understandings of these decisions and the factors influencing them. Further considerations about the educational use of tablet PC’s and its implications for teacher professional development and support will be discussed.

G6.2 Investigating and challenging digital literacy through thoughts and actions of early years’ practitioners
Tove Lafton, Oslo and Akershus University College, Norway

Abstract
Digital media establish themselves as tools in both planning, constructions and performances of practice, and reflections upon the content in early childhood education in Norway. Digital literacy is a complex and much discussed term related to this integration of digital tools. Some of the discussion relates to what words to use – the Norwegian term digital competence or the international term digital literacy.

Early Childhood Practitioners implement a wide range of digital tools in their pedagogical work (Kvinge et al 2011, Bølgan 2009), this calls for discussion and investigation of what a complex and contested term as digital literacy/digital competence may look like in the field of Early Childhood Education. Through the research question How can reflective talks amongst Early Years practitioners challenge and conceptualize the concept digital literacy?, I will discuss the relationship between the terms digital competence and digital literacy, and some possible reconceptualization of the term digital literacy.
Based on an ethnographic inspired fieldwork, preliminary analyses show there are differences in early childhood Practitioners digital competence. When using the term digital competence, this is in line with Krumsvik (2007) and his visualized model of digital competence developed to characterize digital competence phenomena by means of selected parameters (Krumsvik 2012:7).

Figure 1. Digital competence from Krumsvik (2012:6)

This model is hierarchical in the sense that you have to achieve some basic digital skills before you can move on to the next steps towards digital bildung. This idea of knowledge and competence is functional when the unit of analysis is the individual participant.

When the unit of analysis is a group of participants I find myself in need of a re-construction of the term. Inspired by post-human ideas I assume that the construction of digital practices amongst Early Childhood Practitioners includes individual digital competence. Furthermore I build upon an understanding of intra-actions where digital tools and human agency intertwine in the construction of digital practices. Thereby they all make and remake each other (Pickering 1995, Haraway 2008) continuously. Due to this a shift in the position of the subject seems necessary, towards a horizontal exchange between human and technological agency. Consequently, this makes it possible to see the elements in the concept digital competence as non- hierarchical and intertwining. This entrance requires breaking up the categories and investigating how reflections from the field may interact with and create new ideas and understandings of the concept digital literacy. The idea behind moving from competence to literacy in this stage is the divide between competence as a core skill that might even be measured, till a more complex and advanced skill that makes creative and critical use of digital tools and media possible (Erstad 2010). By having a broader perception of digital literacy and combining with theoretical discussions inspired by post-human ideas, the goal is to look into digital literacy without necessarily making its components measurable in a quantitative way. However, the most important distinction may be that situating digital literacy in a professional working group requires another way of treating categories than situating the term individually.

The methodology used to get entrance to ideas and thoughts about digital literacy is named reflective talks. Reflective talk is built over a conversation, and differs from for instance focus groups. In reflective talk my role as a researcher is more like a participant than as a moderator (Morgan 1996). The aim of the talk is to use the participants own personal stories originating in their own digital practices, and engage the practitioners in reflections upon their actions through analytical talk (Cohen 2010). Through reflective talks in two groups of Early Childhood Practitioners, the concept digital practices are put forth in discussions regarding elements in digital literacy and how those elements are operationalized in the field.

Digital literacy is a complex and contested term and I will engage in the discussion by using the voices of the participants and ideas from post-human thinkers of horizontal intra-action between human and digital tools to challenge the idea of digital competence as hierarchical. By re-constructing the design of the concept I intend to focus on how digital literacy is constantly remaking itself through an interdependent relationship with digital practices in the field of Early Childhood Education.
**G6.3** **Exposing formative assessment: Comparing the use and impact of screencast feedback with “traditional” written feedback**  
Carl Simmons, Edge Hill University, United Kingdom

**Abstract**

Problem statement. Teachers expend time producing feedback which aims to bridge a learning gap towards a desired outcome. However, much assessment provides only a feedout function or summarising role. Producing feedback which is both useful and used by students is problematic on a number of counts:

Teacher time: Assessment practices must be both time-efficient and effective for learning. Assessment has costs including opportunity costs in tutors’ time. Feedback dialog in large classes is problematic and delays between submission and feedback have a negative effect on future performance.

Quality of feedback: Within Higher Education (HE) there can be “institutional practices of mystery” (Lillis 2001, p.53) - implicit conventions and expectations which can prevent students understanding criteria. The act of marking in written form can act as self-censorship which may be helpful in providing focus, but may also lead to insufficient information for students to make progress.

Student use of Assessment: Students may find the language used in assessment difficult to understand resulting in ineffective attempts to decode and act. Even where students do receive formative feedback in a form they find helpful, summative elements such as grades can dominate their thinking and subsequent actions, swamping the impact of formative comments. Some students see written feedback as impersonal and judgemental. This gap in intention and interpretation is problematic because it is seldom explored and has emotional consequences. In many cases it may not be possible to determine whether students use feedback at all.

The problem then is how to efficiently assess in a way which makes explicit to students to what extent they have understood; to what extent the learning strategies they have adopted have been appropriate; and what they might do to sustain or correct their learning trajectory. Implicit in this is that students must firstly be engaged by the feedback and see value in investing time and effort in decoding and acting upon it.

Much is known about the potential positive effects of formative assessment. Much less is known about how e-learning technologies might impact upon formative assessment practices.

Having experimented over 2 years with screencast feedback as an assessment tool, initial findings indicate that it has the potential to assist in ameliorating some of the issues above. Screencasting gives students a complete record of the assessment process – a record of the on-screen marking process along with tutor audio comments. This idea of a tutor recording their thought processes in a narrative form rather than handing-down judgements has a number of potential advantages:

1) It could increase the amount of useful, specific feedback provided.

2) There is a mixed modality of situated visual cue and audio comment which may focus attention in a more productive way than a written comment alone.

3) It makes the whole assessment process more transparent and helps model how assessment criteria are used in practice.
4) It may increase the time students spend focussing on specific feedback comments.
5) Vocal cues (such as pace and intonation) may provide additional information so that students understand the intention behind feedback comments.

Research questions and conceptual framework.
1) In producing feedback:-
   a. What are the relative time costs of producing screencast feedback compared to written feedback?
   b. How does screencast feedback differ from written feedback in terms of volume and quality
2) For learners:-
   a. What are the differences in their responses to screencast versus written feedback (emotional, motivational and subsequent action taken)?
   b. To what extent does screencast feedback make the assessment process more transparent via a modelling mechanism?

This small scale mixed-method research compares the formative use and impact of “traditional” written feedback with screencast feedback explored from the perspectives of teacher and student.

Firstly the production of assessment feedback will be examined. This is accomplished via an analysis of assessed work for a control and innovation group using a variety of metrics.
Secondly, differences in how assessment feedback is perceived and used by students is explored. Interviews with students allows an examination of the impact of the feedback mechanism on their perceptions and subsequent actions.

Preliminary findings. The hypothesis is that the benefits of screencast feedback will outweigh any increased time in producing such feedback. Early indications are that such feedback provides greater quantities of focused feedback which is potentially useful to learners and that students perceive such feedback as less threatening and are more inclined to make use of it than “traditional” feedback.

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Session number: G7  Location: Room 1C  Time: 09.00 – 10.30

Paper presentations  Chair: Valerie Van Vooren

Teaching methods: Language teaching

G7.1 The incorporation of social media within writing instruction curriculum: An exploratory study

Delphine Laire and André Mottart, Ghent University, Belgium

Abstract
With the ever growing popularity of computer-mediated communication (NCTE, 2010), new opportunities for second-language teaching are possible. Research has frequently demonstrated the positive impact of Web 2.0 tools such as forums, blogs, and wikis on writing education in foreign-language classrooms. (Liu, Chen & Chang, 2010; Van Coillie, 2010). Particularly, the use of ICT creates a positive student attitude towards learning and writing (De Wever, et al., 2007; Miyazoe & Anderson, 2009). Building on the ideological and technological platform of Web 2.0, other computer-mediated communication such as social media (e.g. Facebook) has become popular (Kaplan & Haenlein, 2009). Social media allows students to generate and exchange content within a real-life situated setting (Sun, 2010).
However there is limited research on the use of social media in teaching practices in general, and writing instruction in second-language teaching in particular. Recent research (Laire, Casteleyn & Mottart, 2012) on the use of a social media tool (Storify) within the practice of writing instruction has indicated similar positive findings towards learning attitude and outcome. This paper will thus focus on the various learning possibilities that social media offers according to the Flemish attainment targets for general education set by the educational decree. At first glance, it seems that the attainment targets - upon which all Flemish schools base their curriculum -, greatly encourages the use of Web 2.0 tools in the classroom. Nevertheless, teachers still seem somewhat “apprehensive” towards this new technology (Casteleyn & Mottart, 2010). Indeed a small-scale exploratory study was conducted (February 2012), investigating and inquiring Flemish secondary EFL teachers’ beliefs and attitude towards computer-mediated-communication. A survey investigating EFL teaching practices and the use of ICT, was sent to 70 EFL teachers in general education, teaching English, German, and French. Additionally, teachers were free to add personal reflections on this integration and use of ICT in their practices. The study confirms the idea that teachers are still hesitant when it comes to the integration of new media in their teaching practices. With the arrival of newly updated attainment targets (2012), teachers will have to find ways in which they can include this technology in their classroom. Based on an extensive literature review, this paper will thus scrutinize these attainment targets in accordance with the writing instruction and how they can be applied to the social media’s learning principles in order to better reach these specific IT attainment targets. Subsequently this paper hopes to come to a better understanding of these attainment targets and how they perceive the use of social media within writing instruction. More generally, the results will hence further look into social media’s practices and learning outcomes within the classroom.

G7.2 Grammar issues: What is the role of the final attainment levels and the curriculum?
Valerie Van Vooren and André Mottart, Ghent University, Belgium

Abstract
Recent studies have shown that in mother tongue education, the level of grammatical knowledge is falling. This falling level was noticed by Davies, Swinburne & Williams (2006), when they were researching the linguistic level of students in higher education in the United Kingdom. Also in Flanders, the Dutch Language Union (2011) has noticed a drop in the grammatical knowledge of first year college students in Flanders. Not only in literature, however, but also in the teachers’ lounges, there is talk of the falling levels of Dutch grammatical knowledge. De Bock’s article ‘Taalfouten zijn blijkbaar niet meer belangrijk’ (‘Linguistic mistakes are apparently no longer important’) (2008) argues that a growing number of Dutch language teachers have noticed a decrease in Dutch grammatical knowledge. This was confirmed by research conducted by Van Vooren & Devos (2008) and Van Vooren, Mottart & Casteleyn (2012) when checking the level of 560 students in their final year of secondary education.

But what is grammatical knowledge? The concept of grammar in itself causes discord. First, there is the problem of which grammar you are addressing. Pepermans (1988) divides grammar into three types: the internal, scientific and school grammar. And this is just one
division out of a wide array of possibilities. Second, not everyone is convinced of the importance of grammar in learning a language, be it first or second language learning. (Fromkin et al, 2003) Third, when convinced of the use of grammar, there is still the matter of choosing a didactical approach when passing on the grammatical knowledge to language learners. There are two approaches that been thoroughly discussed over time. The communicative grammar, which is learned implicitly by functional language use (Ellis, 2001) and the traditional approach incorporating explicit instruction. The traditional approach has been scrutinized on several occasions (Hillocks 1986, Weaver 1996), however, it still holds its ground in the educational settings. Finally, when you have found the right way of teaching grammar, which timing will give you the most return on investment?

All of these questions should be taken into account when drawing up the final attainment levels of Dutch, making these workable through the curriculum, and finally making them concrete in translating them into exercises for the students. This study tries to provide an answer to the research question: How can the final attainment levels and the curriculum play a role in the Dutch grammatical knowledge of students? We first take a closer look at the theories on grammar and grammar instruction with regards to the previously mentioned conceptual problems. Then we compare those theories with the Dutch final attainment levels, the Dutch curriculum and the translation of these general concepts into workbooks and handbooks.

**Session number:** G8  
**Location:** Room 2B  
**Time:** 09.00 – 10.30  
**Chair:** André Mottart  

**Paper presentations**  
**Foreign language teaching**

**G8.1 Socio-constructivist values and teachers’ practices in the adult second language learners’ classrooms**  
Marianne Seppä, University of Helsinki, Finland

**Abstract**  
At present, there are over 180 000 foreign citizens living in Finland and the number continues to increase. The Ministry of Employment and Economy is responsible for the integration of immigrants in Finland. The integration is based on democratic values to ensure that the immigrants can participate in the Finnish society equally. Learning Finnish as a second language is one of the objectives of integration training. The new Integration Act came into force in 2011 and the National Board of Education approved the National Core Curriculum for Integration Training for Adult Migrants and Illiterate Adult Migrants 1.2.2012. The first ever Government Integration Programme for 2012–2015 was issued in June 2012. According to the Integration Act (2010), integration training for adult migrants must be provided in compliance with the National Core Curriculum for Integration training for Adult Migrants (2012).

The new curriculum is based on a socio-constructivist conception of learning. Therefore learning is seen as an interactive process between learners and their learning environment. Adult learners’ prior experience and life history should be taken into account and integration training should increase the learners’ learning-to-learn skills. The teacher should be well aware of the learners’ zone of proximal development (ZPD) (Vygotsky, 1978), and (s)he should take the role of a facilitator to be able to give right-timed support.
This paper examines how these socio-constructivist values meet the practice in the classrooms. The main research questions are: 1) How do the teachers implement the socio-constructivist values of the curriculum in practice, 2) How do teachers analyze the learners’ ZPD and 3) What are the main challenges in the adult second language learners’ classrooms. The study presented here will be part of my doctoral thesis about organizational and pedagogical challenges in the adults’ L2 development in the immigrant integration training in Finland.

The objective of Finnish language and communication skills in integration training is the common reference level B1.1, i.e. functional basic proficiency, but only part of the students will reach this level. According to the National Core Curriculum (2012) the language skills profile may vary by student. This means that students may exceed or fall below the target level in certain areas of language skills according to their individual study plan. Each student’s pathway will be organized in a corresponding student group or within a heterogeneous group by differentiating studies. The instruction in Finnish language is based on a functional conception of language skills, where students are seen as social agents who use language for their own communication needs. Even though differentiated instruction and collaborative teaching approaches are seen as necessary, taking them into practice is a huge challenge. The diversity in classrooms is increasing and the groups are heterogeneous in many ways.

The qualitative data of this paper was collected by using semi-structured thematic interviews, and analysed with the methods of content analysis. Finnish as a second language teachers from the capital area were interviewed for this study. Data was collected in two rounds. In the first round of interviews, the teachers were asked to discuss what kind of differentiation is needed, how they manage to differentiate instruction in practice and what kinds of methods they have experienced as functional. In the second round, teachers were asked to analyse the factors that influence adult second language learners’ development and how they manage to support adult learners. The results show, that there are plenty of good practices in the classrooms. Teachers considered it important to take different learning styles into consideration and to use variable learning methods. Especially co-operative learning methods were seen as affective. Differentiated instruction in one form or another was also seen as necessary in the classrooms. A lack of resources was seen as a key challenge facing teachers in the classrooms. Especially, a lack of time was seen as the biggest challenge. The teachers also required better teaching facilities and support. In concluding, individual teachers should not be solely responsible for their professional competence. Different actors’ contribution and improved cooperation are the key factors in promoting integration and improving integration training for adult immigrants.

G8.2 Future language teachers as experts of the subject: Does teacher education have a role to play?
Mathea Simons, University of Antwerp, Belgium

Abstract
This presentation gives an overview and shares partial conclusions on an ongoing project on content knowledge of future language teachers in teacher education.

Problem statement. A teacher has many roles to fulfill. One of the most important ones is that of expert in the subject field he/she teaches. A teacher should master the contents of
the subject and be able to deepen understanding of and insight in its contents. The importance of this role is emphasized in numerous studies (e.g. Shulmann 1999; Van Gennip & Vrieze 2008; Verloop, van Driel & Meijer 2001) and in many countries this role is an essential part of the Competences profile of future teachers and/or the Teachers’ career profile.

Some teacher education curricula pay great attention to the disciplinary component of the function. Other curricula are based on the assumption that specific content knowledge already has been acquired before starting teacher education and that it is better to focus mainly (casu quo only) on the specific didactic knowledge.

In this presentation we will focus on the expertise we can expect from future teachers of French as a foreign language in the last years of secondary education. The institutional context is a one year teacher education program for students who have already obtained their master degree.

A language teacher does not only teach the foreign language. He/she is also responsible for teaching the culture of the foreign language (Byram & Feng 1994). As teacher educators we came upon serious gaps in the cultural knowledge of our students. In order to offer them a solution during their teacher education, we decided to elaborate an assessment instrument as well as remediation material. The case can be inspiring for other didactics since the complaint about declining knowledge of the subject is frequently and more generally uttered.

Project design. In this presentation we will explain in detail how the assessment instrument and the remediation material were developed (contents and format). The assessment instrument was based on an inventory of cultural elements mentioned in manuals for secondary and adult education (corpus: 78 sources). The items (n = 1700) were grouped in a database, classified in content domains (n= 10 e.g. society, arts, geography) and transformed into test items with levels based on intended knowledge (receptive versus productive) and target group (elementary, intermediate and advanced levels).

The assessment instrument (available on Blackboard) provides detailed feedback on the level of the individual student. If the student does not reach the intended level, he/she works autonomously on the detected lacuna, using remediation trajectories. These trajectories are closely related to the contents of the assessment instrument and are made available by way of syllabi for each content domain. During the completing of the remediation trajectory, the student can use the assessment instrument as many times as he/she wishes in order to (re)determine his/her level. After finalizing the remediation trajectory, the student has to use the assessment instrument again, but now as summative testing. The student has to pass in order to start teaching practice in schools.

The process and the results of the project are monitored using the tests as well as by a questionnaire students are requested to submit at the end of the semester.

Findings and conclusions. The assessment instrument and the remediation trajectories have been implemented in the teacher education program two years ago. In addition to explanations on their realization, we will share findings about this case project. This project establishes that testing instruments and remediation materials are more effective when adapted to the future target context. Culture is a wide concept. Selecting our basic contents in manuals which are students’ future working material appears to contribute to their motivation. Moreover, the meaning of culture is twofold as it can be split into Culture with
a capital c and culture with a small c. If we want to contribute to intercultural language teaching, both components need to be addressed.

Content knowledge cannot be left to chance. Through remediation strategies, re-testing and links with pre-service training, students are likely to develop an increased awareness of its importance. Besides, they will also strengthen their self-efficacy beliefs. Subject content requisites for teachers and pupils are (often) considered positive. The capacity to activate content and to acquire basic competences undoubtedly have an influence on determining what a good teacher should be. Therefore, more effort should be made, both in pre-service and in-service training, to acquire subject-specific knowledge (and competences).

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<td><strong>F12.2</strong> University students learning to regulate together: Evolutions in reciprocal peer tutoring groups’ metacognitive regulation</td>
<td>Liesje De Backer, Hilde Van Keer and Martin Valcke, Ghent University, Belgium</td>
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<td><strong>Abstract</strong></td>
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<td>Problem statement. Given its emphasis on self-management and self-regulation, higher education requires metacognitively skilful learners (Nota et al., 2004). Nevertheless, many students possess insufficient metacognitive skills to self-regulate their learning adequately (Maclellan &amp; Soden, 2006), revealing a need to foster students’ regulation. The latter is especially worthwhile in teacher education, for student-teachers not only require regulation skills to achieve academic success, but are additionally expected to act as metacognitive models towards their students once they enter the teacher profession (Perfect &amp; Schwartz, 2002). Based on Brown (1987), we distinguish orientation, planning, monitoring, and evaluation as the major regulation skills used by students to control and manage their learning. Based on the typology of surface and deep approaches to learning (Vermunt, 1996), we furthermore distinguish between low-level and deep-level regulation. Recently, collaborative learning is considered an important contextual facilitator when promoting metacognition (Hadwin et al., 2011). Despite growing consensus, the role of metacognition in collaborative learning remains unclear as empirical evidence is scarce (Iiskala et al., 2011). The present study aims to clarify the value of collaborative learning, by analysing how metacognitive regulation is characterised within reciprocal peer tutoring (RPT) groups. Peer tutoring is characterised by specific role taking: the tutor questions, clarifies, and scaffolds the learning of the tutees. RPT is characterised by the exchange of the tutor role among students in the RPT-groups (Topping, 2005). In this study, evolutions over time are studied with regard to (a) the frequency of occurrence; (b) the approach (low/deep-level) to and (c) the initiative (by tutor/ tutee) for metacognitive regulation in RPT-groups.</td>
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<td><strong>Method.</strong> Participants and setting. Sixty-four first-year students Educational Sciences who already obtained a Professional Bachelor degree (of which the majority a Bachelor in Education) were randomly assigned to eleven RPT-groups of six students. All RPT-sessions of five randomly selected RPT-groups were videotaped integrally (i.e. 70 hours).</td>
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The face-to-face RPT-programme consisted of eight weekly sessions (2 hours each) and was based on empirical guidelines promoting effective tutoring (e.g. Topping, 2005; Webb, 2009).

Data-analysis. A literature-based coding instrument was developed (e.g. Meijer et al., 2006; Roscoe & Chi, 2007), which represents a multi-layered model of metacognitive regulation. The instrument also indicates for each regulatory action whether it concerns a low-/deep-level approach and whether the initiative is taken by the tutor/tutee.

A unit of meaning – one thematically consistent verbalization of one metacognitive activity by one student – was selected as unit of analysis. In total, 14968 metacognitive units were distinguished. Cohen’s kappa (κ = .89) indicates high interrater reliability for the coding. Binary and multinomial logistic regressions were performed to study differences over time in RPT-groups’ regulation, from the starting (session 1-2), over the intermediate (session 3-4) to the closing intervention phase (session 5-7).

Findings. Logistic regression demonstrates significant differences over time in the occurrence of metacognitive regulation ($X^2(2)= 125.29; p<.001$). Compared to the intermediate phase, the odds of regulating versus not regulating are 1.19 times lower at the start, whereas the odds are 1.13 times higher during the closing phase. As to the approach, results show an initial dominant adoption of low-level regulation (92.0%), which evolves gradually towards a deep-level approach in the closing phase (32.0%). Logistic regression confirms an overall effect of intervention phase ($X^2(2)=774.88; p<.001$), indicating that the odds of deep-level versus low-level regulation increase significantly over time. With regard to the initiative, results indicate that the adoption of regulation in the RPT-groups is initially a tutor-centred responsibility. Tutee-initiated regulation evolves however, gradually from the starting (23.8%) to the closing RPT-session (55.8%). Logistic regression confirms an overall effect of intervention phase, indicating that the odds of tutee-initiative versus tutor-initiative increase significantly over time ($X^2(2)=148.63; p<.001$). Compared to the intermediate phase, the odds of tutee-initiated regulation are 1.52 times lower at the start, whereas the odds are 1.21 times higher at the closing phase.

Conclusion. RPT holds promising metacognitive learning opportunities. The particularities of the RPT-groups appear to have potential to prompt students into more (deep-level) metacognitive regulation as they become more familiar with tutoring. Our results reveal that tutors mainly act as metacognitive models when regulating the groups’ learning. Nevertheless, tutees’ metacognitive awareness appears to be raised through observation, and subsequent internalisation, of this modelled behaviour. Although obtained in a collaborative learning setting, this result can be transferred to both the teacher profession and teacher training, for our findings in general emphasise the importance of social learning (Schunk & Zimmerman, 2007) and the necessity of explicit metacognitive modelling (e.g. by tutors, teachers, or teacher trainers) in order to foster students’ metacognitive regulation.

G9.2 Sharing expertise and social communities through peer mentoring
Säde-Pirkko Nissilä, Oulu University of Applied Sciences, Finland

Abstract
Since work is a more and more important environment of learning, new methods for supporting personal development in work places are needed. Teaching is a profession notorious for high ‘burn-out’, with some describing this process beginning as early as student teaching (Fives, Hamman & Olivarez, 2007). Struggling teachers feel disconnected
and uninspired. A scenario is easily envisioned in which the teacher after years of work is bitterly considering leaving the profession. On the side of them, new teachers make their way through their induction years.

At schools experienced teachers have a lot of contextual knowledge and competences. Value increasing projects like peer-mentoring are supposed to have both conceptual and practical implications for our understanding of teachers’ learning in professional communities and in their subsequent mentor- or menteeship.

The research questions were:

1) What meanings do the mentor-candidates give to interaction in their communities of practice?

2) What meanings do the mentor-candidates give to organizations, learning communities and colleagueship in their communities of practice?

The present study aimed at investigating factors which contribute to variations in teacher coping in various stages of their professional lives in different contexts. The preliminary supposition was that teachers’ ability to sustain their commitment and resilience is influenced by their professional life phases and identities, mediated by the contexts in which they live and work. In other words the idea of sustaining the commitment goes back to the conception of social learning in communities of practice (Wenger, 1998).

These views in mind, peer mentoring seemed to be one of the ways of sharing knowledge, practices and skills between newcomers and experienced teachers. Their knowledge was supposed to dignify the ‘wisdom of practice’ and help open the doors to a professional learning community. Two main aspects of the development of professional learning communities of teachers were highlighted here: what people learn by examining their practices and how they learn to participate in local, national and international positions of teaching organizations.

The peer-mentor-candidates in the present project (2010-2011) were 10 experienced teachers, males and females from 10 different secondary vocational schools, being educated to become peer mentors to their groups of mentees (N=71). The data were collected by structured questionnaires, open-ended questions, free writings and oral feedbacks at the beginning, middle and end of the education.

The research approach was phenomenographic supported by some numerical data. The analysis method was a qualitative content analysis, the research unit being one meaning.

The general findings of this research show that peer-mentor-candidates were given time to share experiences, give meanings to them, strengthen interpersonal relations and learn to listen to their colleagues’ meanings, not only words, and they saw themselves as developers of knowledge.

1) The mentor-candidates expressed that interaction with other participants was ample, extremely important and they had had numerous occasions to practice listening to colleagues, discuss and promote collective reflection. Open discussions and peer support were nurtured by knowledge about human dynamics (Seagal& Horne, 1997). Sharing experiences enhanced the growth of professional identity and the feeling of belonging. The respect towards colleagues and students increased and strengthened the feeling of togetherness. Learning to listen to the colleagues’ meanings, not only words, emphasized the idea of sharing and caring.

2) Coping and satisfaction at work was one of the most significant gains during the project
according to many peer mentor-candidates. They stated that coping at work is in connection to the well-being of themselves and the others. They also reflected on various ways of engaging their colleagues in shared plans, activities and networks. In general they expressed that peer-mentoring was a very motivating way of developing their own and their colleagues’ professional competences.

In a multi-subject group mentor-candidates had realized that their roles were important in their organizations and they saw themselves as developers or creators of knowledge offering mentees chances of the acquisition of knowledge through common participation. The ability to act and socialize in teacher communities needs special support as also does their systemic understanding of their organizations (Senge, 1990).

The most convincing feature in reading and listening to the mentor-candidates words was their collegial respect, sense of professional ethics and personal positive attitudes to their roles in organizations. They hoped that educational organizations should legitimize peer mentoring and invest in it in the future as well.

G9.3 Teacher knowledge, identity and development in an online learning community
Mary Kooy and Jason Brennan, University of Toronto, Canada

Abstract
This longitudinal, ethnographic investigation centers on the unique affordances of online environments for synchronous social learning experiences in virtual learning communities (Brindley & Blaschke, 2009). This study investigates how a group of teachers across multiple sites using technology-mediated communications converse, identify, and document their transitions from professional group to learning community as they construct their inquiries, identities, and professional knowledge. In the spirit of this year’s conference theme, “Excellence of teachers? Practice, policy, and research”, we present data drawn from these conversations that problematize conventional narratives on teaching, professional development, and teacher identities, while simultaneously positing solutions to these challenges through the “relational agency” of this teacher community (Moate, 2011).

Session number: G10 | Location: Room 3B | Time: 09.00 – 10.30

Paper presentations

The challenge of starting to teach

G10.1 Sources of resilience in newly qualified teachers
Kari Smith, Marit Ulvik and Ingrid Helleve, University of Bergen, Norway

Abstract
Introduction. How to handle the induction of newly qualified teachers (NQTs) is a central topic in the educational discussion internationally (OECD, 2005; McNally et. Al., 2008; Haigh & Kane, 2012; Rots et. al., 2012), as well as in Norway (Smith & Ulvik, 2010). There is consensus in the research literature that the first year in teaching is a crucial phase in a teachers’ career. NQTs often get difficult classes, odd jobs in different schools or they are asked to teach subjects not related to their discipline knowledge. Many NQTs feel the lack of support, and they are not always satisfactorily mentored.

However, there is another side of the coin which tells about positive experiences and strengths exhibited by NQTs in their first year (Ulvik, Smith & Helleve, 2009). Many face the challenges and are able to turn them into positive learning experiences. Some realize they
hold competences which exceed the competence of more experienced colleagues. Thus the NQSs should not always be viewed as the weak link in school (Ulvik & Langørgen, 2012).

Previous research has informed about challenges during the induction phase. Less is known why many NQTs at the end of the first year feel positive and are still motivated in spite of demanding experiences. New teachers who cope seem to have a resilience factor which makes it possible to generate their own support networks and learning experiences (Le Cornu, 2009)

This paper aims at identifying the sources for NQTs’ resilience during induction. The research question is: What are the sources for resilience NQTs draw upon during the first year?

Theoretical background. In addition to developing an understanding of the induction phase through the research literature on NQTs, the current paper draws on a theoretical understanding of resilience. Tait (2008) defines resilience as ‘a mode of interacting with events in the environment that is activated and nurtured in times of stress’ (p. 58). She refers to Grotberg’ (1997) who sees resilience as the ‘human capacity to face, overcome, and even be strengthened by experiences of adversity’ (Grotber, 1997, p. 13). Tait (2008) identifies seven categories which represent resilience, ‘social competence, taking advantage of opportunities to develop personal efficacy, using problem solving strategies, ability to rebound after a difficult experience, learning from experience and setting goals for the future, taking care of oneself, and maintaining a sense of optimism’ (p. 69). We are interested in examining the sources to NQTs’ resilience

Methodology. This is a qualitative study using a narrative method. 20 university educated NQTs volunteered to tell their stories to the researchers in the middle and at the end of the first year of teaching. Their stories were framed by a loose interview guide aiming at eliciting meaningful incidents from their teaching (Tripp, 1994) which represented positive as well as negative experiences. The interviews were recorded and transcribed. Based on the transcriptions the researchers wrote a narrative, retelling the story elicited by the interview (Creswell, 2012). The most important thing in using narrative analysis is to write and present the story (ibid). The stories were mailed to the participating NQTs for comments and validation, and their suggested changes were fully addressed. Our aim was to reflect the ‘true’ narrative of the 20 NQTs, being aware of the researchers’ sensitive position in positioning themselves as a messenger of somebody else’s story.

The stories were analysed individually by the three researchers, looking for evidence of and sources for resilience in the stories. The vertical analysis (Kelchtermans, 1999) was first done individually by each of the three researchers followed by a discussion meeting at which we achieved agreement about the resilience commonalities in the stories through a horizontal analysis (ibid). Our aim was, as far as possible, to understand the NQT’s individual story and experiences (Creswell, 2012).

Findings. Preliminary findings indicate that NQTs draw upon sources in school, outside school and within themselves in the process of overcoming difficult experiences and turning them into meaningful incidents used for professional growth.

In school:
- Feedback from pupils
- Successful teaching experiences
Feedback from colleagues and leaders
Outside school:
- Social relationship
- Free-time activities
Within themselves:
- Strong subject matter knowledge
- Stubbornness
- Confident to ask for help
- Professional pride
- Humour

Significance. The findings contribute to our current understanding of why some NQTs are able to turn a demanding phase of their professional career into professional growth and continued motivation to teach. Teacher education and schools need to take responsibility in supporting resilience in NQTs, to help developing courage with the encouragement of significant others (Le Cornu, 2009).

G10.2 Research on new teachers: What does the research literature tell us?
Maria A. Flores, University of Minho, Portugal; Sandra Fernandes, University of Coimbra, Portugal and Patrícia Santos, University of Minho, Portugal

Abstract
Research on new teachers has received attention over the last decades (see, for instance, Williams, Prestage & Bedward, 2001; Hebert, & Worthy, 2001; Flores & Day, Flores, 2004; Flores & Ferreira, 2009). Issues related to the transition from student to teacher, difficulties and problems encountered as full-time teachers, identity and professional development, socialisation into the cultures of teaching, etc. may be found in studies related to the early years of teaching (see, Cole, 1991; Flores, 2001; Avalos & Aylwin, 2007; Curry et al, 2008). Thus, our intention is to find out what is known and what needs to be explored further in research on new teachers. In order words, the paper aims at examining international literature on new teachers and to discuss its implications for research, policy and practice.

In order to do this, articles published in Teachers and Teaching: Theory and Practice (TTTP), directly related to the topic of new teachers were selected. A selection of articles from all issues of TTTP, between 1995 to 2012, was carried out based upon the following descriptors: novice teachers, new teachers, beginning teachers and early career. All of the selected articles present empirical studies developed with new teachers. In total, so far, 21 articles were identified. Articles based upon research concerning student teachers, pre-service teachers or prospective teachers were not considered for the purpose of this review.

A preliminary analysis of the review of published papers in TTTP on new teachers reveal a strong emphasis on themes such as teacher identity, teacher retention, teacher resilience, mentoring and induction, professional relationships, professional development, problems and difficulties in the early years of teaching and comparative studies between novice and experienced teachers. As far as the research methods are concerned, qualitative studies are the majority, including methods such as semi-structured interviews, questionnaires with open-ended questions, written narratives, studies cases, longitudinal studies and
autobiographies. Implications of the findings for induction and teachers education will be discussed in the paper.

G10.3 Sink or swim? Novice teachers and the development of their competences
Vicky Willegems and Katrien Struyven, Vrije Universiteit Brussels, Belgium

Abstract
Introduction. The last few decades, the role and expectations towards novice teachers changed drastically (Aelterman, Engels, Van Petegem & Verhaeghe, 2003). Nowadays, the responsibility of the teacher reaches much further than the classroom. Minimum demands have been put forward to guarantee the quality of the teacher and are postulated as teacher competences (Van Dongen, 2003; Aelterman, Meysman, Troch, Vanlaer & Verkens, 2008). Within the competence-based movement, ‘competency’ indicates the possession and development of integrated skills, knowledge, appropriate attitudes and experience for a prosperous performance (Korthagen, 2004). Similar to many countries, the Flanders’ Department of Education (1998) describes the basic competences for teachers (Table 1). Basic competences are seen as the minimum demands of novice teachers at the ending of teacher education. Yet, research has proven that pre-service teachers are insufficiently prepared for all basic competences (Struyven & De Meyst, 2010). The establishment of competence-based teacher education had the intention to bridge the gap between theory and practice (Wesselink et al., 2003; Biemans et al. 2004). This paper reveals the experiences of novice teachers in turning theory into practice. We formulate an answer regarding two central questions: ‘Are novice teachers prepared for their broad responsibilities?’ and ‘Do novice teachers feel competent in all ten basic competences?’. It is known that the first experiences of a teacher play a crucial role in the development of their competences in the future (Bandura, 1997; Pas, Bradshaw & Hershfeldt, 2012; Tschannen-Moran, Woolfolk & Hoy, 2007). This research looks for the key elements, which facilitate the development of competences of novice teachers in their first years of teaching. Key elements are searched for in 4 areas: teacher education, induction, school culture and years of experience.

Table 1. Overview of the 10 functional components in Flanders’ teacher education (1998), organized by cluster of responsibility (Aelterman, 2008)
Responsibility for the learner
1) The teacher as guide of learning and development process
2) The teacher as educator
3) The teacher as subject expert
4) The teacher as organizer
5) The teacher as innovator and researcher
Responsibility for the school and educational community
6) The teacher as partner of parents or carers
7) The teacher as member of a teaching team
8) The teacher as member of externals
9) The teacher as member of the educational community
Responsibility for society
10) The teacher as culture participant

Method. This study followed a mixed method design, in which the professional perspective
and awareness of the beginning teacher play an important role. The data were gathered through an online survey, conducted among beginning teachers with 1 to 5 years of experience (N=224). One part of the survey assessed their personal sense of competence on all ten basic competences. In addition, the survey verified desired and actual experienced induction conditions during teachers' start in the profession and the level of satisfaction regarding job preparation received in teacher education. Moreover, semi-structured interviews (N=20) were used to gain insight in the processes of competence development by adopting a narrative-biographical approach (Wengraf, 2001).

Results and conclusions. In general, results show that novice teachers are insufficiently prepared in terms of basic competences, to match the expectations located outside the classroom. The beginning teacher indicates to be least prepared after teacher education on: member of the school team (M=1.60; SD=1.12), partner of external contacts (M=1.60; SD=1.03), cultural participant (M=1.47; SD=1.11) and member of the educational community (M=1.11; SD=.98). This study shows that the sense of competence is significantly dependent to the preparations they experienced on each specific competence during teacher education. One out of five respondents in the semi-structured interviews still reports a 'transition shock'. Yet, these figures ought to be seen in the right perspective: novice teachers claim that not all basic competences can be mastered at the end of the teacher education program, but should evidently be further developed at the workplace. To develop the basic competences, beginning teachers appeal for a more structured approach to induction at the start of their teaching task. Colleagues and the school board are identified as the main partners for induction. Four significant features are highlighted as facilitators of sense of competence development: teacher education, induction, school culture and years of experience. Are teacher education programs adequate to prepare novice teachers for the basic competences? Or should induction and learning at the workplace be incorporated to guarantee the professional development of our teachers better?

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**G11.1 Teacher-student interpersonal relationship in Indonesia competence-based agricultural education**

Zainun Misbah, Wageningen University and Research Centre, The Netherlands; Judith Gulikers, ECS, WUR, The Netherlands; Ridwan Maulana, University of Groningen, The Netherlands and Martin Mulder, ECS, WUR, The Netherlands

**Abstract**

Teachers have major contribution to the learning environment of students since they directly influence students with their behaviour (e.g Wubbels & Brekelmans, 1998; den Brok, 2001). Research on investigating teachers and their interaction with students in learning environments studies had been arising during the past three decades. However, research that focusing on teacher-student interaction and its effect on competence outcome in competence based education (CBE) is hardly done. CBE is an innovative education system, which demands different roles of teacher and student, and different
outcome than the traditional education. It can be argued that as CBE requires different roles for teachers and students, the students-teachers interaction are expected to be different in CBE than in traditional education. As CBE aims at fostering different learning outcomes and teacher behaviour influences student learning, different types of teacher-student interaction are expected to be more effective in CBE than in non-CBE.

Researchers in classroom learning environment area have indicated the importance of teacher-student relationships to students’ outcomes for their cognitive (e.g Brekelmans, 1989; den Brok, 2001) and attitudinal aspect (e.g. den Brok, 2001; den Brok et. al, 2005; Telli et al, 2007b; Henderson & Fisher, 2008). Teacher-student interaction is, at least partly, be determined by teacher interpersonal behaviour. These studies share both similarities and differences in terms of their purposes, procedures and results. Some limitations can be observed. Some studies take primary school students (e.g. Fisher, Waldrip & den Brok, 2006) as the subject of the studies while the others use secondary school students (e.g. Rickards, 1998). Only a few study has been found conducted in vocational education setting (e.g. Henderson & Fisher, 2008), and none is in competence based vocational education setting. Therefore, the research questions are as follows:

1) What profiles of teacher interpersonal behaviour can be found in CBE and non-CBE Indonesian vocational agricultural education?

2) Are students’ perception of teacher interpersonal behaviour and students’ motivation to learn in CBE classroom connected?

Research on teacher interpersonal behaviour is much influenced by the work of Wubbels and his colleagues. Wubbels et. al (1985), adapting the work of Leary (1957) on interpersonal relationship and Watzlawick et. al (1967) on systems approach of communication, developed a theoretical framework for conceptualising teachers’ interpersonal behaviour. This became the basis for the Model of Interpersonal Teacher Behaviour (MITB). In the MITB, teacher interpersonal behaviour is mapped using two dimensions namely ‘proximity’ and ‘influence’. Proximity refers to the degree of teachers’ cooperative/friendly behaviour to students, while influences represents the degree of teachers’ control/dominance shown to students (Maulana et al, 2012). Using MITB as the starting framework, Wubbels et. al (1985) introduced instrument for mapping teacher interpersonal behaviour, namely Questionnaire on Teacher Interaction (QTI). QTI has been proven to be highly reliable in terms of internal consistency and cross-culturally valid as it was indicated by several studies internationally (e.g. Rickards et.al, 1996; Rickards, 1998; Kim et. al, 2000; Fisher, et.al, 2006; Maulana et. al, 2012).

Associations between teacher interpersonal behaviour and students’ affective outcomes have been reported by researchers with different degrees of effect of the two dimensions. Den Brok (2001) found a strong connection between teacher interpersonal behaviour, particularly the proximity dimension, and affective outcomes such as pleasure, relevance, confidence and effort. Van Amelsvoort (1999) in Maulana et. al (2012) found that helpful/friendly and understanding behaviours correlate positively with students’ pleasure, relevance, confidence and effort. Overall, research shows that the proximity dimension has a stronger effect on affective outcomes than the influence dimension (Brekelmans & Wubbels, 1991).

The effect of teacher interpersonal behaviour and students outcome are mediated by students’ motivation. Highly motivated students will achieve better improvement/outcome
than less motivated students. Teachers’ ability to generate students’ learning motivation will effect on students’ outcomes. The positive effects of teacher interpersonal behaviour on student motivation have been reported by some former studies (e.g Lapointe, Legault, & Batiste, 2005). When students perceived their teacher as friendly/helpful, they showed higher learning motivation (Brekelmans & Wubbels, 1991).

Data had been collected from 15 agricultural schools in Indonesia this October 2012. Around 1400 students and 80 teachers participated in this study. Findings and discussion of this study will be discussed later since the data entry is still on going process. However, it is expected that the results of this study could help to boost teacher professional development in Indonesia, optimize the quality of teacher-student relationships and also be useful for school leaders, policy makers, educational assessors as students’ perceptions of their teachers interpersonal behavior related closely with students outcome.

G11.2 Teacher knowledge on teacher student relationships: A comparison between different career phases
Luce Claessens, Jan van Tartwijk, Theo Wubbels, Utrecht University, The Netherlands and Perry Den Brok, Eindhoven University of Technology, The Netherlands

Abstract
In all phases of the teaching professional career, being able to create positive relationships with students is a central component of teachers’ ability to teach well (Day, Stobart, Sammons, Kington, Qing, Smees, et al., 2006). More insight in the knowledge of teachers on relationships with students is important when educating (student) teachers in educational and professional development programs. In the study described in this paper, we focus on the knowledge that guides teacher behaviour when communicating with their students. This knowledge can be regarded as the building blocks for the teacher student relationship. We do this by comparing teachers’ relational schemas of positive and problematic relationships at different phases of their career.

According to Baldwin (1992) people develop relational schemas that guide their behavior when interacting with others. A relational schema is an interconnected web of knowledge consisting of a self schema, an other schema, and a script. The self and other schema represent self and other in an interaction and can be regarded as associative networks of declarative knowledge (e.g. specific facts, memories, etcetera). These schemas are linked by both being embedded in a typical pattern of interaction called an interpersonal script (Horowitz, 1988). The interpersonal script can be defined as a cognitive structure representing a specific set of action patterns associated with relationship partners in a specific situation.

In order to conceptualize teachers’ scripts in teacher student relationships, we use the Model of Interpersonal Teacher Behavior (Wubbels, Brekelmans, den Brok, & van Tartwijk, 2006). This model is based on Leary’s interpersonal diagnosis of personality (1975) and its application to teaching (Wubbels, Creton & Hooymayers, 1985). In the model of teacher interpersonal behavior, teaching is conceptualized as a form of communication consisting of a content aspect and a relational aspect. The content aspect describes the content of the interaction (what is being said) and the relational aspect describes the positioning of one towards the other as expressed in the interaction (e.g. the message can be
The Model of Teacher Interpersonal Behavior allows interactions to be plotted along two dimensions; Agency and Communion. These two dimensions are represented as two axis underlying eight types of teacher behavior (authoritative, tolerant authoritative, tolerant, permissive, uncertain, dissatisfied, repressive and strict) and eight types of student behavior (proactive, collaborative, compliant, dependant, timid, dissatisfied, headstrong and critical).

In this study we investigate teachers’ relational schemas with the use of interpersonal theory on teacher and student interactions. Our main research questions are: What relational schemas (scripts, content and situation) do teachers possess of positive and problematic teacher student relationships, and what differences exist between teachers at different phases of their career?

Method. In order to investigate teachers’ relational schemas of positive and problematic relationships, we interviewed 28 teachers with different years of experience and of different interpersonal expertise. In these semi-structured interviews we asked teachers to describe one or two current positive and one or two current problematic relationships they had with students. Teachers were encouraged to elaborate on their answers. In order to analyze teachers’ scripts in teacher student relationships, we used the two dimensions in the Models of Interpersonal Teacher and Student behavior. For both positive and problematic relationships we analyzed scripts teachers mentioned in the interviews, plotting both student and teacher behavior and analyzing the context in which the interaction took place as well as the content of the talk in the interactions.

Preliminary findings. Preliminary analyses show differences due to context (e.g. in positive relationships students are expected to always behave high on communion in informal situations, whereas in the classroom they can also show behavior low on communion), differences due to type of relationship (e.g. positive relationships take place in informal situations outside of the classroom, problematic ones mostly during class) and, differences due to experience and expertise of the teacher (when describing their own behavior in positive relationships, experienced and expert teachers talk more of behavior high on communion than beginning and teachers of lesser interpersonal expertise). Further analyses will focus on these latter differences more profoundly and on (possible) existing patterns within positive and problematic relationships.

Conclusion. With this research we hope to gain insight in how teacher knowledge on teacher student relationships is scripted. Relating these scripts to teacher expertise and experience and exploring the contexts in which these scripts apply, may improve our understanding of what excellence looks like in this very important area of teacher competence.
Session number: G12  Location: Room 3C  Time: 09.00 – 10.30

Paper presentations

Understanding teacher well-being

Chair: Antonia Aelterman

G12.1  Happiness in teacher education: A cross-country study

Raimo Rajala, University of Lapland, Finland; Sarit Segal, Levinsky College of Education, Israel; Maria A. Flores, University of Minho, Portugal and Paula Cowan, University of West Scotland, United Kingdom

Abstract

Teacher education encompasses academic studies, teaching practicums and supervision. Studies into institutional and instructional environment indicate that both social environment and teaching-studying organization are important to study satisfaction (Pascarella & Terenzini, 2005; Thurmond, 2003; Lizzio et al., 2002). Study satisfaction is found to predict future job satisfaction both among student teachers and students in other fields of study. Study satisfaction is an important factor how teachers start their career. Satisfaction as well as commitment to study and positive interaction with peers predict a good start of working life (Rajala, 1999).

Studies on the positive side of wellbeing are almost non-existent among student teachers. There is also scantily knowledge about which components of teacher education promote wellbeing, have a positive contribution to building up expertise, and increase willingness to become a teacher. The present study sets out to survey prevalence of positive emotion and to find out how contents and organization of teacher education is related to wellbeing. The study involves also a comparative aspect of whether factors contributing to wellbeing are similar in four different teacher education systems.

A total of 389 student teachers were studied in Israel (n=128), Finland (n=84), Portugal (n=84) and Scotland (n=93). The data was gathered via a questionnaire comprising both closed-ended and open-ended questions. Wellbeing was measured by using Huebners (2001) Students’ Life Satisfaction Scale, Lyubomirsky and Leppers (1999) Subjective Happiness Scale, Watson, Clark and Tellegens (1988) Positive Affect Negative Affect Scale, and Personal and Professional Wellbeing Scale developed de novo for this study. Components of Teacher Education Scale was also developed de novo. Open-ended questions measured strengths and weaknesses as a teacher, greatest personal successes and failures in teacher education, and what student teachers had learned from them.

Results indicated that differences between the four countries were found on all wellbeing scales. Israeli and Scottish student exhibited highest subjective happiness. Finnish students were highest on life satisfaction and positive affects. Country-wise differences were lowest on personal and professional wellbeing.

Components of teacher education contributing to happiness, willingness to become a teacher and professional expertise were almost identical in each country. Subject of specialty, teaching practicums, former teachers as a model and feedback had the highest mean values. Country-wise analyses on the predictors of wellbeing indicated that the predictors varied by country. Analyses into the relationships between open-ended questions and wellbeing and components of teacher education suggested rather a country-specific than a general pattern.

Findings are discussed with respect to the development of teacher education and
understanding of cross-cultural differences.

G12.2 Understanding teacher well-being within institutional and societal contexts
Laura Liu, Beijing Normal University, China

Abstract

This paper enhances understanding of teacher well-being by developing a theory drawing upon theoretical and empirical literature, particularly prominent scholars whose work continues to influence education practitioners and researchers across international settings. A concept map will be developed to display this theory visually, including “unexpected connections...holes or contradictions” (Maxwell, 2005, p. 47). This theory will seek to tell “an enlightening story” of teacher well-being, while allowing room to be challenged and re-shaped by counter perspectives (Maxwell, 2005, p. 42). Implications for teacher education practice and research across international settings will be offered.

To begin an exploration of teacher well-being, the work of John Dewey is examined as a historical foundation to the U.S. education system. Dewey’s (1916) discussion of the school as a social environment is helpful in understanding teacher well-being as influenced by personal and contextual forces. In the early 1900’s, Dewey (1916) recognized the need for U.S. teachers in diversifying urban areas to take on increasing responsibility for creating harmonious learning contexts able to integrate the lives of students diverse in culture, language, ethnicity, religion, disposition, etc. He encouraged teachers to cultivate an “emotional spirit” within schools to help students merge different pieces of their worlds to not become “split into a being having different standards of judgment and emotion” (Dewey, 1916, p. 22). To guide students in this work, teachers themselves must be emotionally intact, a developmental task that should not be left to chance and merits attention in preservice and in-service teacher education.

Holmes (2005) discusses four aspects of teacher well-being: physical, emotional, mental/intellectual, and spiritual well-being. Physical well-being refers to physical health, while emotional well-being reflects Goleman’s (1995) ‘emotional intelligence,’ the ability to recognize and manage one’s own emotions and empathize with others, while engaging purposefully and productively in society (as cited in Holmes, 2005). Mental/intellectual well-being involves a sense of coherent professional growth, while spiritual well-being enables connecting with a larger meaning for life. Holmes (2005) encourages teachers to look beyond difficult institutional forces to embrace personal responsibility for their well-being – a task presenting “inherent tension” between one’s personal health and institutional requirements (p. 1). Ryan and Deci (2000) similarly offer a continuum along
which greater joy and satisfaction are experienced when internal motivators become more influential than external ones. What is involved in the process of moving from external to internal motivators? How might teachers connect with joy and satisfaction to enhance their well-being and stay in the profession?

Noddings (2003) offers an enlightening perspective in her theory of care, involving a reciprocal relationship between the one-cared-for and the one-caring. In this relationship, one offers “motive energy...at the service of the other” (p. 33), a risk increasing one’s vulnerability to being hurt, yet also diminishing stress by enhancing joy found in relationship with others – a connective joy that “sustains the one-caring” (p. 144).

Confucius’ highly influential work similarly asserts that the greatest joy in life is found in “studying without respite” and learning to “teach others without growing weary” (The Analects, 7:2, as cited in Shim, 2007, para. 17). Similar to Ryan and Decci’s (2000) observation that well-being increases as internal motivation grows, Confucius encourages “voluntary motivation” in teaching as an inherent call within humanity (Shim, 2007, para.17).

More needs to be understood about teacher well-being and its implications for teacher education practice and research. What similarities and differences exist across international views of teacher well-being, including Western and Asian perspectives? How might a coherent framework for this phenomenon be developed? If connective joy is vital beyond socioeconomic comfort to nurture teacher well-being, how can teachers be prepared to relate to and learn from their students (Gonzalez et al., 1995) and colleagues to become more resilient under external pressures, and thereby guide students in this sustaining connective work?

G12.3 Investigating beginning teacher’s emotions and sources of stress prior to practicum
Catherine Mcloughlin, Australian Catholic University, Australia

Abstract
In the last decade there has been an increased awareness of the role of affect and emotions in teacher education. Until recently, there has not been sufficient recognition of the relevance and pivotal role of emotion in teacher self-efficacy and professional identity formation. If we define emotions as socially constructed and personally enacted, we realise that they are relational, meaning that emotional experiences are part of teacher-environment transactions and events. Teaching requires an investment of energy and emotion, as successful teaching requires teachers to relate to, understand and meet the needs of a diverse range of students. The underlying rationale for the study is to understand novice teachers’ affective states and their intensity prior practicum, to investigate their concerns and positive and negative emotions. It is hypothesised that the participants would have higher levels of positive feelings (excited anticipation) than negative feelings (stress, anxiety) towards teaching before the practicum. Using a quantitative methodology, a questionnaire was designed based on an adaptation of two scales that sought to assess the levels of emotional states and stress prior to practicum in preservice teachers enrolled in a Graduate Diploma in Secondary Teaching Program. Results show the interplay of emotions with perceived challenges in teachers’ work, and provide illustrations of teaching events that could trigger both positive and negative
emotions in beginning teachers.

G13.1  **Scire, sentire, facere – Towards intertwining theory and practice in vocational teachers’ and teacher educators’ expertise**  
Esa Virkkula, Martti Pietila and Sade-Pirkko Nissila, Oulu University of Applied Sciences, Finland

**Abstract**
Learning in school organizations offers the basic knowledge needed at work. Learning in work places means keeping skills, knowledge and competence up to date continuously. Work life changes will set challenges to develop one’s competence throughout the career in the future. Teachers’ and professionals’ practical theories filter the gained knowledge to the conceptual frame of teachers (Eraut 1994). The change of conceptions and practices should be conscious.

The aim of the present research was to find out how integrating theory and practice could be accomplished in different vocational contexts, including a wide range of student ages and subjects as well as ranging from basic studies to in-service teacher training. The research also tried to find ways of acting which seemed profitable both to students and teachers. The participants’ attitudes to theoretical and practical premises were also charted as well as their emotional expressions about them.

The study was carried out by three researchers employed in vocational teachers’ pedagogical education, with three different data collections. The research questions were directed to three kinds of informants.

1) How did the engineering students in vocational basic education experience teaching in which theory and practice were integrated?

2) How did multi-subject, academic student teachers experience their teaching training integrating theoretical pedagogical studies?

3) How did in-service vocational teachers experience their learning-at-work periods?

The research project approaches were mainly phenomenographical and they were designed to be studies of lived experiences. The data sets included: classroom action/context observations, online journal posts and net conversations, written reports, interviews and background statistics. The data sources were complementary and detailed experiential information vocalized by the participants. The analysis units ranged from a few words to paragraphs. Thematic patterns were developed that would aid in the construction of a thick description of experiences.

Four main conditions of learning were placed around the central concept: practice, community, meaning and identity. The first two relate clearly to the social context, while the latter two reach towards the individual dimensions, although seen from a social perspective. They are explained as participation in the social process of learning and knowing. Identity, again, is a way of talking about how learning changes who we are and creates personal histories of becoming in our social contexts. (Wenger 1998.)

The studies illustrate how theoretical studies and reality in work practice were intertwined.
Attention was paid also to the affective domain which offered insights into why change in practice demanded new attitudes and understanding from the teacher.

1) In the basic engineering education learning the work meant understanding and increasing understanding through training in real situations (on-the-job learning), through simulated situations and development projects. At work the learner had to test the practicability and adaptability of theory, as well as the changeable character of work and suitability to further development. The richer connections were created between theory and practice, the more flexible was the competence.

2) In vocational teachers’ pedagogical education learning, human and epistemic conceptions, self-knowledge and self-efficacy as well as awareness of work life, up-to-date observations and information of present day practices and equipment were important. Especially networking with education and work life representatives appeared fruitful. Teachers found it necessary to keep their knowledge and skills up to date, develop their thinking and problem solving skills as well as personal professional competence and self-efficacy.

3) Vocational teachers felt that during their work life periods they could create genuine interaction which was significant in the joint development between schools and work places. The influence could be seen both in the promotion of teachers’ personal competences and concrete integration of the school and work place actions. The most central benefits of work life periods to teachers were work-oriented planning and implementation of teaching, developing professional knowledge, the network-oriented view and competence as well as the increase of motivation and coping at work.

According to the project reports the informants felt that during integrating theoretical knowledge and practical exercises as well as learning-at work they could create genuine interaction which was significant first in their personal professional development, in the joint development of the education between schools and work places as well as in all fields of vocational teachers’ professional competences. The most important single finding was the growth of positive professional self-image and self-efficacy.

This is the direction which learning and promoting actions in work places should aim at even more closely in the future: knowing, understanding, gaining self-confidence and increasing skills.

G13.2 Work-related learning in a “learning enterprise”. Determinant factors of learning
Wouter Schelfhout, David Gijbels, Piet Van Den Bossche and Gerd Verhaegen, University of Antwerp, Belgium

Abstract
The last decade the value which is placed on learning in the workplace has increased (De Rick, 2010). In vocational education the workplace is regarded as an environment in which labour related skills can best be acquired (Blokhuis, 2006). Further, encouraging entrepreneurship in the broad sense of the word is high on the Flemish educational agenda (Pascal Smet, Competento, 2012). Research indicates that initiatives aiming at entrepreneurship can grant valuable learning results (Schelfhout, Dochy & Janssens, 2004; Van den Berghe, 2007). For instance research on the effects of ‘small enterprises’ (‘mini-onderneemingen’, Vlajo, 2006, 2012) indicates that this experience can lead to increased
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cooperative skills (Schelfhout et al., 2004). Alongside these ‘small enterprises’ there exist a growing number of initiatives encouraging towards entrepreneurship each with their own approach and merits (Van den Bergehe, 2007). The ‘learning enterprise’ constitutes another example. Students get the chance to become acquainted with the different aspects of a realistic, small enterprise (UNIZO, 2012). These kind of initiatives become more and more prevalent in education, especially in business related curricula. However, certain conditions have to be met in order to assure these (virtual) workplace environments can lead to positive learning experiences. Teachers are not always aware of these conditions and/or not able to constitute them (Poortman, 2007; Schelfhout, 2004; Schelfhout et al., 2006). Therefore the general aim of this research is to search for determinant factors which can explain and support learning in a ‘learning enterprise’ as an example of a (virtual) business oriented workplace.

Learning in the workplace demands students/employees who can learn (sufficient prior knowledge, skills and learning skills), want to learn (motivation) and a workplace which offers learning opportunities (Onstenk, 1994). Quality and characteristics of the learning environment and of coaching are important determinants (Onstenk, 1997, 2003; Van den Bossche et al., 2011). Also individual characteristics of the student are influential (Ellström, 2001). Research of Gijbels, Raemdonck and Vervecken (2010) indicates that a ‘self-directed learning orientation’ – the degree to which students recognise learning opportunities, take initiative and endure while encountering difficulties - play a role. This points to the importance of understanding the learning processes which underlie learning in the workplace in order to be able to anticipate with relevant measures. Illeris (2002) on this behalf argues that all learning involves the integration of two different processes, an external proces of interaction between the learner and his or her social, cultural and material environment and an internal psychological proces of acquisition and elaboration.

In this research the theoretical framework which has been developed by Poortman (2007) based on the learning theory of Illeris (2002) has been used as a basis. In this framework six types of social interaction processes are discerned: perception, transmission, experience, imitation, activity and participation. For the internal processes four categories are discerned: accumulation, assimilation, accommodation and transformation (Poortman & Visser, 2009).

The main question in this research is: “How do environmental factors as characteristics of a workplace learning environment and individual factors of the students explain learning processes within a learning environment?” To answer this question in an explorative way a multiple case study design has been used (Yin, 2003). Four learning enterprises participated. In each enterprise a questionnaire was administered to the whole class and students were observed and interviewed on the workplace. For each of the four cases a vertical analysis was done. Therefore a deductive approach was chosen, starting from the different categories of the theoretical framework. Relevant data from the transcribed interviews, observations and questionnaires were classified within the assumed structure. In a next phase a comparative horizontal analysis was done to indicate eventual patterns. Based on these analyses five conclusions can be drawn. First learning enterprises can lead to gaining knowledge, skills and attitudes within the context of a workplace. Second characteristics of the workplace such as variation, autonomy, participation and complexity also for learning enterprises are important factors to explain learning. Third besides the
direct support which one can get from fellow students and teachers, the overall quality of cooperation within the different learning enterprise teams do play an important role. Fourth also for learning enterprises individual characteristics of the students such as self-directed learning orientation are influential. Finally the research indicates that the authenticity of the context plays a role. It seems that the more authentic, the more powerful the learning environment.

**G13.3 A model: Representing the essential factors of a school-based teaching practice experience**

Bill Ussher, University of Waikato, New Zealand

**Abstract**

Learning teaching is a personal, relational and complex endeavour (Bell, 2011; Groundwater-Smith, Ewing & Le Cornu, 2011). With many participants involved in the process of learning teaching, each participant experiences these opportunities differently. The number of recent studies into school-based experiences (Ussher, 2011) indicates the importance placed on this aspect of initial teacher education (ITE) programs and as Green and Reid (2004, p. 255) remind us, all initial teacher education is situated in a specific context and it “should always be understood as a situated practice. As such, it is always located somewhere, socially, spatially and historically”. An important feature of each teaching practice experience (TPE) highlighted by a range of researchers is providing opportunities for student teachers to learn teaching in context (Beck & Kosnik, 2002; Le Cornu, 2004; Lind, 2004; Walkington, 2004). Considering TPEs as contextual learning opportunities requires that all ITE partners will seek to maximize learning for the student teacher to take advantage of the context.

This paper is based on a qualitative study focusing on one innovative ITE programme offered by the University of Waikato, New Zealand. Student teachers in a three-year undergraduate degree programme studied primary teaching in their home district through distance learning strategies in combination with several weeks of on-campus study. In addition, they were required to spend one day per week in a local school. Data were gathered through narratives, focus group conversations and interviews with the main partners in the program: student teachers, classroom teachers and university lecturers. The foundation of this study was the conceptual framework created to investigate the literature and data of primary ITE school-based placements.

The starting point for the model came from the work of Northcott and McCoy (2004) who used analysis modelling to investigate a range of settings with their tertiary students. The first step in addressing the research question, “What are the perceived key factors of a primary teacher-education school-based placement?” was to record all concepts associated with TPEs. A data-set was generated by recording thoughts and ideas which was then ordered to identify categories of meaning. Initially, data for the three partners were considered independently but later it was considered appropriate to blend the data together. The next stage was the theoretical coding (Northcott & McCoy, 2004) which was described in detail, seeking clarification in the meaning of each factor. The following factors were identified: perspective, knowledge, relationships, managing demands, coherence, social participation, networks and connections, interactions, reflection, professional commitment, resources, context and history. Each factor was then explored
for connectedness to the other factors to determine influences. Personal qualitative evidence only was applied to create the model without any rigorous quantitative testing to prove causal relationships.

From the findings of the initial investigation the original conceptual framework was revised into a theoretical model. This model identifies three primary drivers of TPE placements: Resourcing of the placement in terms of people and time; Context and History of the partners such as background, legacy and associations; and Professional Commitment as indicated through expectations, demands and requirements. These three primary drivers I speculate were fundamental to the perceived success of these placements. Where these existed then they impacted positively on the three secondary drivers that follow: Knowledge as defined as knowing the school, the children, and placement as well as theories and practice for both learning and teaching and having an overall understanding of the ITE programme; Reflection as dependent on agency arising from professional commitment and knowledge; and Perspective as exposure to a wide range of practices and theories. These three secondary drivers I theorize were fundamental to the perceived success of these placements. The model also identified two pivotal factors. First, being able to rationalize, prioritize and manage the demands and challenges of a placement was essential; and effective relationships were reciprocal in that those involved can seek as well as provide support. These two pivotal factors are highlighted as the factors upon which many of these placements were perceived as successful or not. In essence, when these factors were well established they positively impacted the following factors – interactions, networks, connections, social participation and coherence. These final five factors were not evaluated in this study but they are included in the model. While the model is not complete nor on its own will it ever change the outcome of placements, it is offered for consideration as a further step in the process of review and development of ITE programmes where learning teaching occurs in a social, spatial and historical context.

### Paper presentations

**Teacher in relation to knowledge**

**G14.1 A “scripted profession”: Teachers’ adherence to practical knowledge over theoretical knowledge in the era of standardization and accountability**

Linor Hadar, University of Haifa, Beit-Berl College, Israel; Dalya Markovich, Wurud Jayusi and Lori Greenberg, Beit-Berl College, Israel

**Abstract**

This paper explores how new teachers perceive the contribution of their formal training to their current professional practice. Specifically we examined teachers’ understanding of theoretical knowledge and practical training as contributors to who they are as professionals. Using semi-structured interviews we asked 60 teachers of maximum 5 years seniority, all graduated from the same teacher training institution in Israel, to talk about the contribution of the teacher training program to their current practice and to who they are as teachers. Our findings suggest that teaching, according to our teachers, is a ‘scripted profession’. Learning to become teachers should center on explicit procedures of teaching and on training in using particular techniques and materials. In such a profession, the
intellectual character of teaching disappears as well as differences in knowledge and experience of individual teachers. This has tremendous implications on the future of education in general and on the teaching profession in particular, especially reconfiguring teaching as an occupation that lacks a relevant body of theoretical-philosophical knowledge, striving for oversimplifying the complexity of teacher preparation and normalizing the teaching profession in light of prescribed structures while reducing teachers’ agency.

Introduction. The educational discourse on accountability, performance objectives, standards, national testing and national curriculum involves not only policy makers, but relates to teacher skills, and the relation of teacher skills to ability of students to perform well (Darling-Hammond, 2000a). Teacher professionalism is, thus, considered as one of the most important factors in determining student achievement (Darling-Hammond, 2000b; NCTAF, 1996). In dealing with the complex classroom reality, teachers need to employ their professional knowledge and make decisions which involve much more then transmitting of facts and ideas (Munby, Russel & Martin, 2001; Shulman, 1987; Wills et al, 2007; Wills, 2009; Gunzenhauser, 2012). They need to think strategically and make reasoned judgment concerning many aspects of their teaching.

In trying to prepare student teachers to meet the challenges that wait for them in the educational field, teacher education programs offer student teachers training programs in which they build their professional knowledge. This paper explores how new teachers perceive the contribution of the teacher training program to their current practice and to who they are as professionals.

Methods. Using semi structured interviews we asked 60 teachers of maximum 5 years seniority, all graduated from the same teacher training institution in Israel, to talk about the contribution of the teacher training program to their current practice and to who they are as teachers. We interviewed graduate teachers from various levels of seniority (ranging from one to five years) and from various teaching subjects (English, science, math, arts, etc.). We also interviewed both Arab and Jewish graduate teachers. The interviews were transcribed and analyzed using grounded theory methodology (Strauss & Corbin, 2008). We identified preliminary categories in the interview data. Subjectivity in the initial selection was avoided and trustworthiness was obtained by a method in which these categories were abstracted separately by each of the researchers. The second phase included comparing and revising these lists to achieve agreement and to create larger categories of responses. After building the final category scheme the interview transcripts were examined again for similarities, differences, and complementarities across and within individual participants.

Results. According to the teachers, any learning that is of intellectual, philosophical or of critical character, contradicts the ‘desired’ practical learning of teaching methods. Direct learning of teaching methods (i.e. how to teach) can help teachers acquire skills that they need in order to make their students perform well in light of pressures of accountability, standards, and national testing. We found that the everyday reality of teaching with the stress on performativity reduces the ways that teacher define their professional role to be merely instrumental emphasizing the technical core of teaching. Thus teachers emphasize the important of practical knowledge that, according to them, "provides us with ‘to do"
lists," and deemphasize theoretical aspects of their training which are conceived as "all those things they teach like philosophy that you never touch and they have no meaning." Moreover, teachers claim that some of the theoretical knowledge they were exposed to could even harm their professional performance: "if I'll use this staff in the real world [in class] I would probably get fired," and "implementing some of the philosophical-critical things we had learned will jeopardize my position in school.

Conclusions. Our analysis shows how macro educational processes are connected to micro processes, i.e. how educational policy affects teachers' understanding of their profession. Teaching according to our teachers is a 'scripted profession'. Learning to become teachers should center on explicit procedures of teaching and on training in using particular techniques and materials. In such a profession, the intellectual character of teaching disappears as well as differences in knowledge and experience of individual teachers. Teachers are no longer autonomous thinkers but are manufacture-line operators. This has tremendous implications on the future of education in general and on the teaching profession in particular. First, these notions reconfigure teaching as an occupation that lacks a relevant body of theoretical-philosophical knowledge. Second, they strive for oversimplifying the complexity of teacher preparation, and third, they normalize the teaching profession in light of prescribed structures while reducing teachers' agency.

G14.2 The conceptualization and operationalization of pedagogical content knowledge in mathematics education research
Fien Depaepe, Lieven Verschaffel and Geert Kelchtermans, KU Leuven, Belgium

Abstract
Problem statement and research question. The concept ‘pedagogical content knowledge’ (PCK) was introduced by Shulman (1986) to emphasize the central role of subject matter in the practice of training and evaluating pre-service teachers. It refers to “that special amalgam of content and pedagogy that is uniquely the province of teachers, their own special form of professional understanding” (Shulman, 1987, p. 8). PCK was, and still is, very influential in research on teaching and teacher education, especially in mathematics education (Ball, Thames, & Phelps, 2008). However, a systematic review of the way in which mathematics educational research has picked up the notion of PCK is missing. The paper provides a systematic review of the way in which PCK is conceptualized and investigated in empirical mathematics educational research.

Method. We conducted a systematic review of the research literature through the consultation of ERIC, PsycInfo, and Web of Science. Search terms were pedagogical content knowledge and mathematics and had to be mentioned in the abstract, keywords, and/or title. These search terms produced a total number of 811 results. Narrowing down this number was done using the following criteria: (1) published in peer-reviewed journals, (2) written in English, (3) a focus on pedagogical content knowledge within mathematics education, (4) based on empirical (quantitative and/or qualitative) research. The application of these selection criteria resulted in a dataset of 60 research articles. Each article was summarized in a classification scheme including seven aspects: the definition of PCK, the components that were distinguished in PCK, the research question, the number and features of the participants, the mathematical domain that was investigated, the country in which the study was conducted, and the research method.
Findings. First, there is large agreement concerning the general definition of PCK: it is about teachers’ knowledge at the intersection of content and pedagogy on which teachers rely in making decisions in teaching particular subject matter. Second, there seems to be less consensus regarding the components that PCK actually covers. In 26 studies PCK is conceptualized as in the original Shulman definition (1986), including two components: knowledge of instructional strategies and representations, and knowledge of students’ (mis)conceptions. In nine studies the authors enroll in the conceptualization of Ball and colleagues (e.g., Ball et al. 2008) of ‘mathematical knowledge for teaching’ (MKT) in which PCK includes knowledge of content and students, knowledge of content and teaching, and knowledge of content and curriculum. Whereas in all but one article in which the components of PCK are specified the two components of Shulman’s definition (and which parallels the first two components of Ball’s conceptualization) are included, also other components are added to the notion PCK, i.e., knowledge of mathematics tasks and cognitive demands, knowledge of educational ends, contextual knowledge, content knowledge, or pedagogical knowledge. Remarkably, in six articles PCK is not defined at all and in ten articles the components that constitute PCK are not mentioned.

Third, six major research lines characterize PCK research in mathematics education: the nature of PCK, the relation between PCK and content knowledge, the relation between PCK and instructional practice, the relation between PCK and personal characteristics, and the development of PCK.

Fourth, about half of the studies are conducted with pre-service teachers; the other half with in-service teachers.

Fifth, the most popular mathematics subdomains on which the studies focus are rational numbers (mainly at the elementary school level), and algebra and functions (mainly at the secondary school level).

Sixth, more than half of the PCK studies are conducted within the US context.

Seventh, what concerns the research methods we can roughly distinguish two distinct types of PCK research in mathematics education that are about equally represented: more large-scale studies that typically use a PCK-test (such as the MKT-test or a self-developed instrument) and more small-scale studies that rely on lesson observations, interviews, observations of meetings, and/or document analysis.

Conclusion. This paper reports on similarities and differences in the way in which PCK is conceptualized and investigated in empirical mathematics education research. It is, first, noticed that scholars agree on a general definition of PCK while they disagree on the components that it comprises. Second, we noticed different approaches to investigate PCK, varying from more large-scale quantitative studies that measure (pre-service) teachers’ PCK through a test to more small-scale qualitative studies that attempt to unravel the PCK by using multiple data sources.

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<th>How one physical education teacher and former students position themselves before the relationship to knowledge?</th>
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<td>Luiz Sanches Neto, Luciana Venâncio and Mauro Betti, Universidade Estadual Paulista, Brazil</td>
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</table>

Abstract

Often we refer to the school as a traditional and secular institution, responsible for the
formal education of people marked by historical processes, culture and different social and economic positions. We know that there are different schools and each one comprises time, space, and singular subjects. Such singularities are influenced by complex aspects that ultimately legitimize, offer resistance, and/or reframe legal, political, and pedagogical issues from the experiences shared by individuals in specific communities of practice. The school in the contemporary world, so as the Brazilian basic education, under diverse circumstances, seems to expose pedagogical challenges and political obstacles to be faced from polysemy to idiosyncrasy. In this polysemous and idiosyncratic perspective we turn our focus to a singular formal educational process in which teaching and learning practices were held between individuals considering both the physical education and the relationship to knowledge. Since the late 1980s, in contrast to the traditional teaching of physical education – based on technical assumptions that conceive the body as a physiological "machine" – several innovative theoretical and methodological propositions – based on behavioral, critical, and emancipatory intentions – were presented in Brazil towards directing and qualifying practices developed in elementary and high schools. Particularly the concepts and methods involved in teaching sports at schools were heavily criticized, and suggestions have been presented in the literature for didactic changes. In this text we aim to present the preliminary results of a PhD research in Education, which intends to: identify, describe, understand, and interpret the relationship to knowledge established by a group of 24 former students and one teacher-researcher from a shared experience with physical education classes (6th to 9th grade) at a public school in São Paulo, Southeastern Brazil. Some explicit choices have been decided about the research procedures, based on the researcher’s assumptions about the field of study and the research problem, the relationships intertwined with the subjects, and the ways of affecting and being affected by these relations during the investigation. In the first stage of the research we used the learning memorials and focus groups as strategies to generate data that would allow the rigorous deepening about the implications of an educational practice with autonomous and emancipatory features, which may or may not lead us to understand the relationship to knowledge between the subjects. The recollection of the practice through narratives using learning memorials, recognizing them as an initial challenge to identify and understand the clues that could lead to uncovering aspects pertaining to the relationship to knowledge, seemed to be an appropriate procedure. The themes that permeated the teacher-researcher’s memorials were: being a teacher, the teaching triad, the lived experience, the theory and practice relations, and oral and written speeches on the work. Two focus groups were organized with 11 and 13 former students. Respectively, the FG1 counted with 7 girls and 4 boys; and the GF2 with 7 girls and 6 boys. Photographs of their own physical education classes in conjunction with provocative questions to raise dialogues and interactions about their experiences towards the knowledge were presented to both groups, in order to generate data and other stimulus materials. The initial categories refer to the recovery and diversification of experiences; continuity and interaction of experiences; continuity and discontinuity of experiences; participation and collaborative interdependence; fear, shame, and frustration towards the knowledge; positive and/or negative reading towards the teacher. The results indicate that there is evidence on the need of a pedagogical time/moment by the subject of his/her own movement, through ruptures, continuities, confrontations, and reminiscences to assign
meanings to her/his own experiences towards the knowledge in a particular location and with the help of people. When the subjects engage themselves, they mobilize resources to put themselves in motion, they assign senses/meanings, and they have desires and reasons to act. This effect is produced by relationships within a system, or relations towards the world, and with other subjects that occupy different social positions in life. We consider relevant the data generated so far when faced with the strategies used and the urgency of investigation in the field of education based on empirical research that seeks to unveil some aspects of the relationship to knowledge in the physical education perspective. The perception and exposure of the educational fragilities by both the teacher and by the students reinforce the possibilities for each one to tell her/his own history, to move forward, and to reveal new paths of investigation on different educational processes.
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APPENDIX
RESTAURANTS AND BARS

A recurrent question during conferences is: "What are authentic places to have dinner or drinks?". Therefore, the local staff of the Department of Educational Studies has created a list with all of their favourite restaurants and bars. A selection of this list is presented in the appendix. The complete list is available online (http://www.isatt2013.ugent.be/food.php and http://www.isatt2013.ugent.be/drinks.php).

Dining in Ghent

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<th>Lunch</th>
<th>Dinner</th>
<th>Kitchen</th>
<th>Website</th>
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<th>You should try ...</th>
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<td>Multatuli</td>
<td>Huidenveterskaai 40, 9000 Ghent</td>
<td>Tuesday to Saturday from 6pm to 10.30pm; on Sundays 5.30pm to 10pm</td>
<td>Mondays</td>
<td>From € 8-23</td>
<td>From € 8-23</td>
<td>Traditional as well as world cuisine</td>
<td><a href="http://www.eetkaffee-multatuli.be">www.eetkaffee-multatuli.be</a></td>
<td>Original and healthy food on the menu and of course very tasty!</td>
<td>The vegetarian meals</td>
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<tr>
<td>Thalia</td>
<td>Sint-Pietersnieuwstraat 138, 9000 Ghent</td>
<td>Monday until Friday: 8.30am-8pm (Friday until 9pm)</td>
<td>Saturday and Sunday</td>
<td>€ 6-16</td>
<td>€ 6-16</td>
<td>Quiches, salads, pasta, croques, fajitas and enchiladas</td>
<td><a href="http://www.eethuis-thalia.be">www.eethuis-thalia.be</a></td>
<td>A good option for a rather quick lunch in a cosy interior</td>
<td>One of the housemade quiches: delicious!</td>
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<td>Tuesday to Friday; Saturday evening</td>
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<tr>
<td>Coeur d’Artichaut</td>
<td>Onderbergen 6, 9000 Ghent</td>
<td>Tuesday until Saturday from 12am to 2.30pm and from 6pm to 10pm</td>
<td>Sunday and Monday</td>
<td>€ 35</td>
<td>€ 50</td>
<td>Gastronomic</td>
<td><a href="http://www.artichaut.be">www.artichaut.be</a></td>
<td>Local food. Fine Wines.</td>
<td></td>
</tr>
<tr>
<td>Mosquito Coast</td>
<td>Hoogpoort 28, 9000 Ghent</td>
<td>Tuesday to Saturday from 11am; Sunday from 3pm</td>
<td>Monday</td>
<td></td>
<td></td>
<td>World kitchen and local food</td>
<td><a href="http://www.mosquitocoast.be/main.php?lang=en&amp;loc=resto">http://www.mosquitocoast.be/main.php?lang=en&amp;loc=resto</a></td>
<td>Hanging around in the Mosquito Coast always feels like travelling at the same time. Not just the decorating, but the whole atmosphere breathes: I am not at home!</td>
<td></td>
</tr>
<tr>
<td>Tuin van Eten</td>
<td>Kortijkesteenweg 573, 9000 Ghent</td>
<td>Monday-Tuesday: 11.30am-2pm; Wednesday-Thursday: 11.30am-2pm and 6pm-8pm; Friday: 11.30am-2pm and 6.30pm-9pm</td>
<td>Saturday, Sunday</td>
<td>€ 10</td>
<td>€ 10</td>
<td>Vegetarian</td>
<td><a href="http://www.restauranttuinvaneten.be">www.restauranttuinvaneten.be</a></td>
<td>Nice vegetarian lunch</td>
<td></td>
</tr>
<tr>
<td>Restaurant</td>
<td>Address</td>
<td>Opening times</td>
<td>Closed</td>
<td>Lunch</td>
<td>Dinner</td>
<td>Kitchen</td>
<td>Website</td>
<td>Why recommended?</td>
<td>You should try ...</td>
</tr>
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<tr>
<td><strong>Il Folletto</strong></td>
<td>Drabstraat 30, 9000 Ghent</td>
<td>Monday to Friday: 11.45am-2pm and 6pm-10.30pm; Saturday: 6pm-11pm</td>
<td>Sunday</td>
<td>€ 8-20</td>
<td>€ 8-20</td>
<td>Italian</td>
<td><a href="http://www.ilfolletto.be">www.ilfolletto.be</a></td>
<td>Authentic Italian Cuisine. Good ratio price/quality</td>
<td>The fresh pastas and freshly prepared pizzas.</td>
</tr>
<tr>
<td><strong>Volta</strong></td>
<td>Nieuwe Wandeling 2B, 9000 Ghent</td>
<td>Lunch: 12am-2pm; dinner 7pm-9pm</td>
<td>Sunday, Monday</td>
<td>€ 30</td>
<td>€ 65</td>
<td>/</td>
<td><a href="http://www.volta-gent.be">www.volta-gent.be</a></td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td><strong>Belga Queen</strong></td>
<td>Graslei 10, 9000 Ghent</td>
<td>Kitchen daily: 12am-2.30pm and 7pm-11pm (Thursday-Saturday until 12pm); tearoom every day from 3pm to 7pm with reduced à la carte card; the Lounge bar is open from Monday to Saturday from 7 pm until ...</td>
<td>Sunday, Monday</td>
<td>Business lunch</td>
<td>€ 23-64</td>
<td>Brasserie style cuisine</td>
<td><a href="http://www.belgaqueen.be/home.asp?city=2&amp;Lang=1">http://www.belgaqueen.be/home.asp?city=2&amp;Lang=1</a></td>
<td>/</td>
<td>/</td>
</tr>
</tbody>
</table>
### Drinks

#### Trappistenhuis

<table>
<thead>
<tr>
<th>Address</th>
<th>Brabantdam 164, 9000 Ghent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opening times</td>
<td>Mondays till Fridays 11am till 2am; Saturdays from 4pm onwards; Sundays from 6pm onwards</td>
</tr>
<tr>
<td>Closed</td>
<td>/</td>
</tr>
<tr>
<td>Type of bar</td>
<td>Beer – especially special beer: Trappist and a very great deal more</td>
</tr>
<tr>
<td>Website</td>
<td><a href="http://www.trappistenhuis.be">www.trappistenhuis.be</a></td>
</tr>
<tr>
<td>Why recommended?</td>
<td>Nice atmosphere, cosy, a lot of choice in drinks, and nice snacks</td>
</tr>
<tr>
<td>You should try ...</td>
<td>‘Kaasplank’: great to pick the snacks with cheese and a lot more</td>
</tr>
</tbody>
</table>

#### Café De Zoo

<table>
<thead>
<tr>
<th>Address</th>
<th>Oudburg 2, 9000 Ghent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opening times</td>
<td>Every day from 4pm onwards</td>
</tr>
<tr>
<td>Closed</td>
<td>/</td>
</tr>
<tr>
<td>Type of bar</td>
<td>Trendy</td>
</tr>
<tr>
<td>Website</td>
<td><a href="http://www.deachtzaligheden.be/#/nl/cafe-de-zoo">http://www.deachtzaligheden.be/#/nl/cafe-de-zoo</a></td>
</tr>
<tr>
<td>Why recommended?</td>
<td>Ideal to relax with colleagues or friends after a hard day of work</td>
</tr>
<tr>
<td>You should try ...</td>
<td>One of the cocktails, while sitting on the sofa</td>
</tr>
</tbody>
</table>

#### Rococo

<table>
<thead>
<tr>
<th>Address</th>
<th>Corduwaniersstraat 57, 9000 Ghent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opening times</td>
<td>Almost every night from 10pm onwards</td>
</tr>
<tr>
<td>Closed</td>
<td>/</td>
</tr>
<tr>
<td>Type of bar</td>
<td>Regular drinks</td>
</tr>
<tr>
<td>Website</td>
<td><a href="http://www.patershol.be/?q=content/rococo">http://www.patershol.be/?q=content/rococo</a></td>
</tr>
<tr>
<td>Why recommended?</td>
<td>It has a unique atmosphere, candlelight, a very friendly bartender/owner Betty, a wonderful terrace and is situated in one of the oldest and most characteristic quarters of Ghent</td>
</tr>
<tr>
<td>You should try ...</td>
<td>Anything Betty suggests</td>
</tr>
</tbody>
</table>

#### Hot Club de Gand

<table>
<thead>
<tr>
<th>Address</th>
<th>Schuddevisstraatje - Groentenmarkt 15b, 9000 Ghent [search well, the bar is located at the end of an alley next to ‘t Dreupelkot]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opening times</td>
<td>Daily from 3pm</td>
</tr>
<tr>
<td>Closed</td>
<td>/</td>
</tr>
<tr>
<td>Type of bar</td>
<td>Regular drinks</td>
</tr>
<tr>
<td>Website</td>
<td><a href="http://www.hotclubdegand.be">www.hotclubdegand.be</a></td>
</tr>
<tr>
<td>Why recommended?</td>
<td>The bar has live music almost every night and tap water is for free</td>
</tr>
<tr>
<td></td>
<td>Roomer (a drink made in Ghent)</td>
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<td>-------------------------</td>
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</tbody>
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<table>
<thead>
<tr>
<th><strong>Manteca</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Address</strong></td>
<td>Cataloniestraat 2, 9000 Ghent</td>
</tr>
<tr>
<td><strong>Opening times</strong></td>
<td>Every evening</td>
</tr>
<tr>
<td><strong>Closed</strong></td>
<td>Not before 2 am</td>
</tr>
<tr>
<td><strong>Type of bar</strong></td>
<td>Very laid-back jazz café</td>
</tr>
<tr>
<td><strong>Website</strong></td>
<td><a href="http://citysecrets.nieuwsblad.be/gent/z/manteca-1758041">http://citysecrets.nieuwsblad.be/gent/z/manteca-1758041</a></td>
</tr>
<tr>
<td><strong>Why recommended?</strong></td>
<td>A small cozy bar with good music (if you like jazz)</td>
</tr>
<tr>
<td><strong>You should try ...</strong></td>
<td>The mojito is nice. If you prefer beer, try the Belgian Trapists: Orval, Chimay, Westmalle...</td>
</tr>
</tbody>
</table>