Education in the Crossroads of Economy and Politics

Role of Research in the Advancement of Public Good

PROGRAMME

17th Biennial EARLI Conference for Research on Learning and Instruction

27.08 - 02.09.2017
### Conference Annotations:

#### NEW SESSIONS:

<table>
<thead>
<tr>
<th>Session</th>
<th>Title</th>
<th>Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>B: 28</td>
<td>SYMPOSIUM: &quot;FOCUSING (ON) TEACHER ATTENTION AND LEARNING&quot; IN ROOM:</td>
<td>MAIN BUILDING A - A32.</td>
</tr>
<tr>
<td>D: 31</td>
<td>SYMPOSIUM: &quot;ANALYSING PRODUCTIVE CLASSROOM AND PROFESSIONAL DIALOGUES ACROSS CONTEXTS USING DIFFERENT TOOLS&quot; IN ROOM: MAIN BUILDING C - C8.</td>
<td></td>
</tr>
<tr>
<td>F: 24</td>
<td>SYMPOSIUM: &quot;INFLUENCES ON TEACHERS' JUDGMENT ACCURACY CONCERNING STUDENT ACHIEVEMENT AND EDUCATIONAL TRANSITIONS&quot; IN ROOM: MAIN BUILDING A - A2A.</td>
<td></td>
</tr>
<tr>
<td>F: 25</td>
<td>SYMPOSIUM: &quot;WHAT DOES IT TAKE TO BE MOTIVATED – THE IMPACT OF SOCIAL RELATIONSHIPS AND SOCIAL SKILLS&quot; IN ROOM: MAIN BUILDING A - A2B.</td>
<td></td>
</tr>
<tr>
<td>H: 27</td>
<td>SYMPOSIUM: &quot;EARLY CHILDHOOD EDUCATORS' PROFESSIONAL COMPETENCES FOSTERING MATHS AND SCIENCE&quot; IN ROOM: MAIN BUILDING A - A2A.</td>
<td></td>
</tr>
<tr>
<td>J: 29</td>
<td>PAPER SESSION: &quot;TEACHING AND TEACHER EDUCATION - U&quot; IN ROOM: MAIN</td>
<td>BUILDING D - D10B.</td>
</tr>
<tr>
<td>J: 30</td>
<td>PAPER SESSION: &quot;INQUIRY LEARNING&quot; IN ROOM: VIRTA - 112.</td>
<td></td>
</tr>
<tr>
<td>J: 31</td>
<td>PAPER SESSION: &quot;LIFELONG LEARNING&quot; IN ROOM: MAIN BUILDING A - A2B.</td>
<td></td>
</tr>
</tbody>
</table>
SPECIAL SESSION: EDUCATIONAL SCIENCE AND POLICY-MAKING

Chair
Hans Gruber, University of Regensburg, Germany

Organiser
Eero Ropo, University of Tampere, Finland

Educational Science and Policy-Making
Manfred Prenzel, Technical University of Munich (TUM), Germany; Dirk Van Damme, OECD, France; Kai Sauer, Finland Ambassador to UN, Finland; Olli-Pekka Heinonen, Finnish National Board of Education, Finland; Lisa Laakso, University of Tampere, Finland; Sanna Järvelä, University of Oulu, Finland

SINGLE PAPER: EDUCATIONAL EVALUATION, ACCOUNTABILITY AND SCHOOL IMPROVEMENT

Chair
Eva Vass, Australia

School-to-school collaboration as a school improvement strategy
Daniel Muijs, University of Southampton, United Kingdom

To lead school development towards inclusion - changes in school culture, norms and practice
Magnus Erlandsson, Malmö University, Sweden

Changing policy, legislation and its effects on pedagogical leadership: a comparative study
Jiří Kropáč, Palacký University, Czech Republic; Stefan Chudy, Faculty of Education, Palacky University, Czech Republic; Danping Peng, Faculty of Education, Palacky University, Czech Republic

Measuring Learning, Governing Education
Asko Kauppinen, Malmö University, Sweden; Anna Wärnby, Malmö University, Sweden
### Session A: 2  
**Time:** 13:15-14:45  
**Location:** Pinni B - B3116

**SINGLE PAPER: TEACHER PROFESSIONAL DEVELOPMENT - C**

**Chair**  
Ronald Rinehart, University of Northern Iowa, United States

**Teacher who perceive low student engagement use for fear appeals prior to a high-stakes examination**  
Dave Putwain, Liverpool John Moores University, United Kingdom; Laura Nicholson, Edge Hill University, United Kingdom

**The effects of generic and profession-specific teacher variables on instructional quality**  
Franziska Baier, Goethe-Universität Frankfurt, Germany; Anna-Theresia Decker, Goethe-University Frankfurt, Germany; Mareike Kunter, Goethe-Universität Frankfurt, Germany

**On the road to teachership: Student teachers’ identity negotiations in the pedagogical studies**  
Maarit Arvaja, University of Jyväskylä, Finland; Anneli Sarja, University of Jyväskyla, Finland; Matti Taajama, University of Jyväskylä, Finnish institute for educational research, Finland

**Teacher Students’ and Mentors’ Orientations – How Differences Influence Professionalization**  
Julia Kosinar, University of Applied Sciences and Arts Northwestern Switzerland, Switzerland; Emanuel Schmid, University of Applied Sciences and Arts Northwestern Switzerland, Switzerland; Anna Laros, University of Applied Sciences and Arts Northwestern Switzerland, Switzerland

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### Session A: 3  
**Time:** 13:15-14:45  
**Location:** Virta - 120

**SINGLE PAPER: TEACHING AND TEACHER EDUCATION - Q**

**Chair**  
Helena Viholainen, University of Jyväskylä, Finland

**Impact of Professional Development on Teacher Facilitation of Science Discourse: a case study**  
Emily Reigh, Stanford University, United States; Florencia Gomez Zaccarelli, Stanford University, United States; Hilda Borko, Stanford University, United States; Jonathan Osborne, Stanford University, United States

**MacGyver and Mother Teresa in one: Teachers’ job satisfaction, conceptions of learning and role**  
Katrin Poom-Valikkia, Tallinn University, Estonia; Erika Löström, University of Helsinki, Finland; Kirsti Kisenko, Tallinn University, Estonia; Tuuli Oder, Tallinn University, Estonia

**The effect of school-based experience on preservice teachers’ self-efficacy beliefs**  
David Berg, University of Otago, New Zealand; Lisa F. Smith, University of Otago, New Zealand

**Learning climate and conflicts in teacher education practice**  
Johan Kristian Andreassen, University of Agder, Norway; Rune Hoigaard, Department of Public Health, Sport and Nutrition, Norway
### Session A: 4

**Time:** 13:15-14:45  
**Location:** Main Building D - D14

**SYMPOSIUM: EXPLORING THE ADOPTION AND SUSTAINABILITY OF AN INFORMAL STEM EDUCATION INNOVATION**

**Chair**  
Kirstiina Kumpulainen, University of Helsinki, Finland

**Discussant**  
Thomas Hillman, University of Gothenburg, Sweden

- **Adaptation begets adoption: How an educational innovation became part of the regular school day**  
  Reed Stevens, Northwestern University, United States; Jaakko Hilppö, University of Helsinki, Finland; Kemi Jona, Northeastern University, United States

- **Organizing for interest discovery and peer support in a free-choice environment**  
  Daniela DiGiacomo, University of Colorado at Boulder, United States; William Penuel, University of Colorado Boulder, United States; Katie Van Horne, University of Colorado Boulder, United States

- **How do teachers make sense of a new infrastructure for learning?**  
  Kirstiina Kumpulainen, University of Helsinki, Finland; Antti Rajala, University of Helsinki, Finland; Anna Mikkola, University of Helsinki, Finland

- **Productive deviations: students’ agency and adaptations of FUSE**  
  Reed Stevens, Northwestern University, United States; Jaakko Hilppö, University of Helsinki, Finland

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### Session A: 5

**Time:** 13:15-14:45  
**Location:** Linna - K103

**SYMPOSIUM: MORALITY IS NOT ENOUGH – DIMENSIONS AND FACTORS CONTRIBUTING TO TEACHER ETHOS**

**Chair**  
Karina Heinrichs, Otto-Friedrich-University Bamberg, Germany

**Discussant**  
Dimitris Pnevmatikos, University of Western Macedonia, Greece

- **To be moral is not enough – Relatedness of moral personality to the professional ethos**  
  Fritz Oser, University of Fribourg, Switzerland

- **Empathy – a core concept of teacher ethos, but not enough?**  
  Karina Heinrichs, Otto-Friedrich-University Bamberg, Germany; Simone Ziegler, Otto-Friedrich-University Bamberg, Germany; Julia Isabella Warwas, University of Bamberg, Germany

- **Teacher ethos: A stable moral personality trait or a situation-specific competence?**  
  Alfred Weinberger, Pädagogische Hochschule der Diözese Linz, Austria

- **Does teachers’ ethos need morality?**  
  Brigitte Latzko, University of Leipzig, Germany; Eveline Gutzwiler-Helfenfinger, University of Teacher Education of Lucerne, Switzerland; Anne-Cathrin Paeßler, University Leipzig, Germany; Katrin Gottlebe, University Leipzig, Germany
**SYMPOSIUM: FORGING FORWARD IN AND THROUGH THE ARTS THROUGH EDUCATION**

**Chair**  
Georgina Barton, University of Southern Queensland, Australia

**Discussant**  
Viviana Sappa, Swiss Federal Institute for Vocational Education and Training, Switzerland

<table>
<thead>
<tr>
<th>Topic</th>
<th>Speakers</th>
</tr>
</thead>
<tbody>
<tr>
<td>The place of the arts in curriculum and schooling: Improving the quality of education</td>
<td>Georgina Barton, University of Southern Queensland, Australia; Robyn Ewing, University of Sydney, Australia</td>
</tr>
<tr>
<td>Art and Soul: Upholding the human right to education and cultural participation</td>
<td>Martin Kerby, University of Southern Queensland, Australia; Margaret Baguley, University of Southern Queensland, Australia</td>
</tr>
<tr>
<td>Arts-based research, wellbeing and A/r/tography: Developing individual capabilities</td>
<td>Susanne Garvis, University of Gothenburg, Australia; Abbey MacDonald, University of Tasmania, Australia</td>
</tr>
<tr>
<td>Arts, language, training, education, learning (AlféA)</td>
<td>Martin Kerby, University of Southern Queensland, Australia; Jean-Charles Chabanne, ENS de Lyon, France</td>
</tr>
</tbody>
</table>

**ANNOTATIONS:**  
The presentation by Martin Kerby (Art and Soul: Upholding the Human Right to Education and Cultural Participation) is cancelled and moved to Session K:13.

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**SYMPOSIUM: ACCULTURATION AND ADJUSTMENT OF MINORITY YOUTH: INDIVIDUAL, FAMILY, AND SCHOOL RELATED FACTORS**

**Chair**  
Elena Makarova, University of Applied Sciences and Arts Northwestern Switzerland, Switzerland

**Discussant**  
Kerstin Göbel, University of Duisburg-Essen, Germany

<table>
<thead>
<tr>
<th>Topic</th>
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</thead>
<tbody>
<tr>
<td>Person-Centered Trajectories of Cultural Behaviors and Values among Chinese American Adolescents</td>
<td>Linda Juang, University of Potsdam, Germany; Moin Syed, University of Minnesota, United States</td>
</tr>
<tr>
<td>Family Related Factors for Minority Youths’ Acculturation and Their School Adjustment</td>
<td>Elena Makarova, University of Applied Sciences and Arts Northwestern Switzerland, Switzerland; Judith ‘t Gilde, University of Vienna, Austria; Dina Birman, University of Miami, United States</td>
</tr>
<tr>
<td>Parental Coping Efforts on Successful Education of Minority Youth: The “Tanoda” Schools in Hungary</td>
<td>Janos Gyori, Eötvös Loránd University, Hungary</td>
</tr>
<tr>
<td>Role of School in Immigrant Students’ Literacy Performance and Acculturation into the New Society</td>
<td>Orly Haim, Beit Berl College, Israel, Israel</td>
</tr>
</tbody>
</table>

**ANNOTATIONS:**  
**IMPORTANT NOTICE:** This session will take place in Room Pinni B - B3117.
### SYMPOSIUM: THE USE OF RUBRICS FOR FEEDBACK AND LEARNING – NEW INSIGHTS FROM RESEARCH

**Chair**  
Robbert Smit, University of Teacher Education St.Gallen, Switzerland  

**Discussant**  
Anders Jonsson, Kristianstad University, Sweden

#### Peer-assessors’ heuristics and peer-feedback produced in peer assessment with the use of rubrics
Ola Tsivitanidou, University of Cyprus, Cyprus; Costas Constantinou, University of Cyprus, Cyprus

#### The effect of co-created rubrics on self-regulation, performance and self-efficacy
Juan Fraile, Universidad Francisco de Vitoria, Spain; Ernesto Panadero, Universidad Autónoma de Madrid, Spain; Rodrigo Pardo, Universidad Politecnica de Madrid, Spain

#### Rubrics as diagnostically formative feedback tools – A study in compulsory schools
Niels Bech Lukassen, University College of Northern Jutland / Aarhus University, Denmark

#### The impact of a rubric on primary students’ self-efficacy and mathematical reasoning competence
Robbert Smit, University of Teacher Education St.Gallen, Switzerland; Patricia Bachmann, University of Teacher Education St.Gallen, Switzerland

**Annotations:**  
The presentation by Niels Bech Lukassen (Rubrics as Diagnostically Formative Feedback Tools – A Study in Compulsory Schools) is cancelled.

### SYMPOSIUM: PATTERNS AND FOCI OF TUTORING DIALOGUES IN PRIMARY CLASSROOMS

**Chair**  
Stefanie Schnebel, University of Tübingen, Germany  

**Discussant**  
Kathrin Krammer, University of Teacher Education Lucerne, Switzerland

#### Teachers’ Scaffolding in Problem Solving Tasks in Technology Education
Julia Steinfeld, Duisburg-Essen University, Germany

#### Knowledge-building patterns in educational dialogue
Helmi Muhonen, University of Jyväskylä, Finland; Helena Rasku-Puttonen, University of Jyväskylä, Finland; Eija Pakarinen, University of Jyväskylä, Finland; Anna-Maija Poikkeus, University of Jyväskylä, Finland; Marja-Kristiina Lerkkanen, University of Jyväskylä, Finland

#### Cognitive activating or social regulating – foci in tutoring dialogues in primary science classes
Stefanie Schnebel, University of Tübingen, Germany

#### Teachers’ knowledge, professional development and learning support practice for science education.
Franziska Vogt, University of Teacher Education St.Gallen, Switzerland
<table>
<thead>
<tr>
<th>Chair</th>
<th>Outcomes and implementation quality of a Dutch family literacy program: Early Education at Home</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caroline Villiger, University of Teacher Education Bern, Switzerland</td>
<td>Sanneke de la Rie, Rotterdam University of Applied Sciences, Netherlands; Roel van Steensel, Erasmus University Rotterdam, Netherlands</td>
</tr>
<tr>
<td>Discussant</td>
<td>Paired Reading with parents’ or volunteer tutors: Do process features explain differential effects?</td>
</tr>
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<td>Paul Leseman, Utrecht University, Netherlands</td>
<td>Caroline Villiger, University of Teacher Education Bern, Switzerland; Silke Hauri-Junghans, Pädagogische Hochschule FR, Switzerland; Annette Tettenborn, University of Teacher Education of Lucerne, Switzerland; Isabelle Hugener, University of Teacher Education Lucerne (PH Luzern), Switzerland; Manuela Frommelt, University of Teacher Education of Lucerne, Switzerland; Catherine Naepflin, University of Teacher Education of Lucerne, Switzerland</td>
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<td>Stimulating parent-child interaction through storytelling activities of a family literacy program</td>
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<td>Rosa Teepe, Radboud University Nijmegen, Netherlands; Inge Molenaar, Radboud University Nijmegen, Netherlands; Ron Oostdam, University of Applied Sciences Amsterdam, Netherlands; Ludo Verhoeven, Radboud University Nijmegen, Netherlands</td>
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<td>Beyond the text: fathers and mothers engaging with their toddlers around a book</td>
</tr>
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<td>Elisabeth Duursma, University of Wollongong/Early Start Research Institute, Australia</td>
</tr>
</tbody>
</table>

ANNOTATIONS:
The presentation by Elisabeth Duursma (Beyond the Text: Fathers and Mothers Engaging with their Toddlers Around a Book) is cancelled.
## SYMPOSUM: TEACHERS’ PROFESSIONAL COMPETENCES, INSTRUCTIONAL QUALITY AND STUDENT LEARNING OUTCOMES

**Chair**
Christian Bruehwiler, University of Teacher Education St.Gallen, Switzerland

**Discussant**
Trude Nilsen, University of Oslo, Norway

**Video-based Promotion of Teaching Competences in Teacher Education**
Mirjam Kocher, University of Education Zurich, Switzerland; Matthias Baer, Educational University Zurich, Switzerland; Christine Villiger, Educational University Zurich, Switzerland; Anna Locher, Educational University Zurich, Switzerland

**Relations between mathematics teachers’ knowledge, skills and instructional quality**
Armin Jentsch, University of Hamburg, Germany; Lena Schlesinger, University of Hamburg, Germany; Gabriele Kaiser, University of Hamburg, Germany; Ute Suhl, Humboldt-University Berlin, Germany; Sigrid Blömeke, University Oslo, Norway

**Effects of teachers’ pedagogical knowledge and skills on their instructional quality**
Caroline Nehls, University of Cologne, Germany; Johannes König, University of Cologne, Germany; Armin Jentsch, University of Hamburg, Germany; Lena Schlesinger, University of Hamburg, Germany; Gabriele Kaiser, University of Hamburg, Germany; Andreas Busse, University of Hamburg, Germany; Sigrid Blömeke, University Oslo, Norway

**Impacts of teachers’ professional knowledge and beliefs on teaching quality and student achievement**
Christian Bruehwiler, University of Teacher Education St.Gallen, Switzerland; Lena Hollenstein, University of Teacher Education St.Gallen, Switzerland; Benita Afloler, University of Teacher Education St.Gallen, Switzerland; Titus Guldmann, University of Teacher Education St.Gallen, Switzerland

## SYMPOSUM: COLLABORATIVE TEACHING AND INCLUSION: BENEFITS AND CHALLENGES

**Chair**
Susanne Schwab, University of Wuppertal, Germany

**Discussant**
Ineke Pit-ten Cate, University of Luxembourg, Luxembourg

**Under which conditions do primary school teachers cooperate in inclusive education?**
Frank Hellmich, Paderborn University, Germany; Susanne Schwab, University of Wuppertal, Germany; Fabian Hoya, Paderborn University, Germany; Garnze Görel, University of Paderborn, Germany

**Collaborative classroom practice for inclusion**
Susanne Schwab, University of Wuppertal, Germany; Una O’Connor Bones, Ulster University, United Kingdom

**Co-teachers as change agents towards more inclusive education**
Elke Struyf, University of Antwerp, Belgium; Dian Fluit, University of Applied Sciences Utrecht, Netherlands; Cok Bakker, UCR / Utrecht University, Netherlands

**Collaboration for Inclusive Education - “It is just there on paper”**
Estelle Swart, Stellenbosch University, South Africa; Mirna Nel, North-West University, South Africa
**SYMPOSIUM: PRODUCTIVE COLLABORATION CONTEXTUALIZED IN SCIENCE LEARNING: THEORIZING THE ROLE OF ANCEDEMENTS**

**Chairs**
Toni Rogat, Purdue University, United States; Simone Volet, Murdoch University, Australia

**Discussant**
Martina Nieswandt, University of Massachusetts Amherst, United States

**Students’ epistemic beliefs about group process as antecedents for collaborative interactions**
Toni Rogat, Purdue University, United States; Ala Samarapungavan, Purdue University, United States; Clark Chinn, Rutgers University, United States; Temitope Adeoye, Purdue University, United States; Todd Shuba, Purdue University - West Lafayette, United States

**Interdependent impact of diverse motivational profiles in student-led collaborative learning**
Simone Volet, Murdoch University, Australia; Marja Vauras, University of Turku, Finland; Cheryl Jones, Murdoch University, Australia

**Investigating the antecedents to productive collaboration in physics teams**
Susanne Lajoie, McGill University, Canada; Maedeh Kazemitabar, McGill University, Iran; Emanuela Buonamici, McGill University, Canada

**The role of histories, contexts and interactions in shaping engagement**
Susan Nolen, University of Washington, United States; Milo Koretsky, Oregon State University, United States

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**SYMPOSIUM: DESIGNING TASKS THAT FOSTER LEARNING**

**Chair**
Antje Proske, TU Dresden, Germany

**Discussant**
Joerg Zumbach, University of Salzburg, Austria

**On-line and Off-line Tasks to Foster Learning from Text**
Danielle McNamara, Arizona State University, United States; Kathrin McCarthy, Arizona State University, United States; Scott Hinze, Virginia Wesleyan College, United States

**Measuring task model construction while working with multiple documents**
Jean-Francois Rouet, University of Poitiers, France; Raquel Cerdan, Faculty of Psychology, University of Valencia, Spain; Eduardo Vidal-Abarca, Universidad de Valencia, Spain; Silvia Giménez, University of Valencia, Spain

**Fostering Text Comprehension by Encouraging Students to Generate and Answer Their Own Questions**
Gregor Damnik, TU Dresden, Germany; Antje Proske, TU Dresden, Germany; Hermann Körnle, TU Dresden, Germany; Susanne Narciss, TU Dresden, Germany

**Improving academic writing by macro-structural questions that support source text comprehension**
Antje Proske, TU Dresden, Germany; Felix Kapp, TU Dresden, Germany; Susanne Narciss, TU Dresden, Germany

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### Session A: 15  13:15-14:45  Location: Pinni B - B3109

**SYMPOSIUM: ADVANCES IN STUDIES ON AGENCY AND DEVELOPMENT IN EDUCATIONAL SETTINGS; CONCEPTS AND METHODS**

**Chair**  
Jeroen Imants, Radboud University Nijmegen, Netherlands

**Discussant**  
Michael Goller, University of Paderborn, Germany

- **Agency-promoting leadership in transforming organizational practices in Finnish teacher education**  
Päivi Hökkä, University of Jyväskylä, Finland

- **Exploring in-service teachers ‘sense of agency: changes after participating in a Master program**  
Giuseppe Ritella, University of Helsinki, Finland; Maria Beatrice Ligorio, Università degli Studi di Bari, Italy; Maria Antonietta Impedovo, Aix Marseille University, France

- **Assessing contemporary research on agency—a methodological perspective**  
Crina Damşa, University of Oslo, Norway; Dominik E. Froehlich, University of Vienna, Austria; Andreas Gegenfurtner, Technische Hochschule Deggendorf, Germany

- **Bridging teacher professional development and school reform; the role of agency**  
Jeroen Imants, Radboud University Nijmegen, Netherlands; Merel van der Wal, Radboud University Nijmegen, Netherlands

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### Session A: 16  13:15-14:45  Location: Pinni B - B3110

**SYMPOSIUM: INTERACTIONS WITH TEACHERS, PEERS AND PARENTS: JOINT CONTRIBUTIONS TO CHILD DEVELOPMENT IN SCHOOL**

**Chair**  
Karine Verschueren, KU LEUVEN, Belgium

**Discussant**  
Erin McTigue, University of Stavanger, Norway

- **How do teacher emotional and autonomy support relate to child language and self-regulation skills?**  
Marina Lemos, University of Porto, Portugal; Joana Cadima, University of Porto, Portugal; Tiago Ferreira, University of Porto, Portugal; Teresa Leal, University of Porto, Portugal; Karine Verschueren, KU Leuven, Belgium

- **Peer acceptance and teacher-child interactions: Relative contribution to kindergartners’ development**  
Tessa Weyns, KU Leuven, Belgium; Hilde Colpin, KU LEUVEN, Belgium; Sarah Doumen, Universiteit Hasselt, Belgium; Karine Verschueren, KU Leuven, Belgium

- **Teacher behavior with peer-rejected students: Associations with peer status and academic achievement**  
Marloes Hendrickx, Utrecht University, Netherlands; Tim Mainhard, Utrecht University, Netherlands; Henrike Boor-Klip, Radboud University, Netherlands

- **Children’s behavioral and motivational adjustment: Relationship with mothers and teachers**  
Eija Pakarinen, University of Jyväskylä, Finland; Riitta-Leena Metsapelto, University of Jyväskylä, Finland; Marja-Kristiina Lerkkanen, University of Jyväskylä, Finland; Anna-Maija Poikkeus, University of Jyväskylä, Finland; Jari-Erik Nurmi, University of Jyväskylä, Finland
### SYMPOSIUM: COGNITIVE DETERMINANTS AND ASSOCIATION BETWEEN ARITHMETIC AND READING

**Chair**  
Mikko Aro, University of Jyväskylä, Finland

**Discussant**  
Ann Dowker, University of Oxford, United Kingdom

**Domain specific and general cognitive correlates of arithmetic and it's covariance with reading**  
Tuire Koponen, University of Jyväskylä, Finland; Jonna Salminen, University of Jyväskylä, Finland; Riikka Heikkinen, University of Jyväskylä, Finland; Mikko Aro, University of Jyväskylä, Finland

**Concordance Between Reading and Arithmetic Skills: Stability and Change from Grade 1 to Grade 7**  
Heidi Korpipää, University of Jyväskylä, Finland; Tuire Koponen, University of Jyväskylä, Finland; Mikko Aro, University of Jyväskylä, Finland; Kaia Aunola, University of Jyväskylä, Finland; Asko Tolvanen, University of Jyväskylä, Finland; Anna-Maja Poikkeus, University of Jyväskylä, Finland; Marja-Kristiina Lerkkanen, University of Jyväskylä, Finland; Jari-Erik Nurmi, University of Jyväskylä, Finland

**Learning from your mistakes: Associations between cognitive control, metacognition and arithmetic**  
Elien Bellon, KU Leuven, Belgium; Wim Fias, University of Ghent, Belgium; Bert De Smedt, KU Leuven - University of Leuven, Belgium

**Cognitive correlates of dysfluency in arithmetic and reading**  
Jonna Salminen, University of Jyväskylä, Finland; Tuire Koponen, University of Jyväskylä, Finland; Mikko Aro, University of Jyväskylä, Finland; Riikka Heikkinen, University of Jyväskylä, Finland

### SYMPOSIUM: MULTIPLE INFLUENCES OF LANGUAGE ON NUMBER SKILLS AND MATHEMATICS ACHIEVEMENT

**Chairs**  
Camilla Gilmore, Loughborough University, United Kingdom; Iro Xenidou-Dervou, Loughborough University, United Kingdom

**Discussant**  
Bert Reynvoet, KU Leuven, Belgium

**Risk Classification for Low Mathematics Performance in Preschool: The Role of Mathematical Language**  
David Purpura, Purdue University, United States; Elizabeth Wehrspann, Purdue University, United States; Amy Napoli, Purdue University, United States; Sara Hart, Florida State University, United States

**Reading and math abilities differentially predict math competencies in young children**  
Jacob Paul, The University of Melbourne, Australia; Robert Reeve, University of Melbourne, United Kingdom

**Number Word Processing in English-Chinese Bilinguals**  
Becky Wong, National Institute of Education, Singapore; Rebecca Bull, National Institute of Education, Singapore, Singapore

**Language effects on adults’ number line processing: An eye-tracking study**  
Iro Xenidou-Dervou, Loughborough University, United Kingdom; Lieven Verschaffel, K.U.Leuven, Belgium; Koen Luwel, KU Leuven, Belgium; Camilla Gilmore, Loughborough University, United Kingdom; Ernest Van Lieshout, VU University Amsterdam, Netherlands
Session A: 19
Time: 13:15-14:45
Location: Main Building D - D13

**SYMPOSIUM: MIXING METHODS FOR ADVANCING HIGHER EDUCATION RESEARCH**

**Chair**
Miriam Barnat, University of Hamburg, Germany

**Discussant**
Judith Schoonenboom, University of Vienna, Austria

**Help seeking and friendship in learning community networks**
Jasperina Brouwer, University of Groningen, Netherlands; Andreas Flache, University of Groningen, Netherlands; Ellen Jansen, University of Groningen, Netherlands; Adriaan Hofman, University of Groningen, Netherlands; Christian Steglich, University of Groningen, Netherlands

**A Mixed Methods approach to evaluate the effectiveness of mathematics teacher education in Germany**
Nils Buchholtz, University of Oslo, Norway

**Combining methods to study the effects of first-year support on students’ academic competence**
Elke Bosse, University of Hamburg, Germany; Miriam Barnat, University of Hamburg, Germany

**Using mixed methods to support educational design decisions in ‘bad data’ contexts**
Tobias Jenert, University of St.Gallen, Switzerland

Session A: 20
Time: 13:15-14:45
Location: Main Building C - C6

**SYMPOSIUM: PROCESSING DYNAMIC VISUOSPATIAL INFORMATION: INFLUENCES OF HAND PROXIMITY AND MULTI-TOUCH GESTURES**

**Chair**
Romy Brümme, Leibniz-Institut für Wissensmedien, Germany

**Discussant**
Paul Ginnis, University of Sydney, Australia

**Hands on and action: Near-hand film presentation boosts attentional control on multi-touch devices**
Romy Brümme, Leibniz-Institut für Wissensmedien, Germany; Birgit Brucker, Leibniz-Institut für Wissensmedien (IWM), Germany; Peter Gerjets, University of Tuebingen, Germany

**Learning on multi-touch devices: Is directly touching dynamic visualizations helpful?**
Romy Brümme, Leibniz-Institut für Wissensmedien, Germany; Birgit Brucker, Leibniz-Institut für Wissensmedien (IWM), Germany; Sarah-Christina Weber, Leibniz-Institut für Wissensmedien (IWM), Germany; Peter Gerjets, University of Tuebingen, Germany

**Impact of visuospatial abilities and interaction device in learning to manipulate 3D virtual objects**
Mireille Betrancourt, University of Geneva, Switzerland; Damien Gauthier, University of Geneva, Switzerland

**Influence of MultiTouch gestures on the 3D rotation of a figure in an embodied cognition approach**
Didier Blanqui, University of Toulouse, France; Franck Amadieu, University of Toulouse, France; Claudette Mariné, University of Toulouse, CLE, France; Mireille Betrancourt, University of Geneva, Switzerland
<table>
<thead>
<tr>
<th>Session A: 21</th>
<th>Time: 13:15-14:45</th>
<th>Location: Main Building A - A3</th>
</tr>
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<tbody>
<tr>
<td><strong>SYMPOSIUM: TRAJECTORIES TOWARDS ADAPTIVE EXPERTISE: CONNECTING SCHOOL MATHEMATICS AND OUT-OF-SCHOOL EXPERIENCES</strong></td>
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<tr>
<td><strong>Chair</strong></td>
<td>Developing calculation flexibility in multi-digit division – a latent transition analysis</td>
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<tr>
<td>Erno Lehtinen, University of Turku, Finland</td>
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<td><strong>Organiser</strong></td>
<td>Andreas Schulz, Zurich University of Teacher Education, Switzerland; Timo Leuders, University of Education Freiburg, Germany</td>
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<td>Erno Lehtinen, University of Turku, Finland</td>
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<tr>
<td><strong>Discussant</strong></td>
<td>The Effects of the Number Navigation Game on the Development of Adaptive Number Knowledge</td>
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<tr>
<td>Camilla Björklund, University of Gothenburg, Sweden</td>
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<td>Boglarka Brezovszky, University of Turku, Finland; Jake McMullen, University of Turku, Finland; Minna M Hannula-Sormunen, University of Turku, Finland</td>
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<tr>
<td><strong>Is it real, or a joke? Realistic considerations to word problems in a test versus a humor setting</strong></td>
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<td>Wim Van Dooren, KU Leuven, Belgium; Lieven Verschaffel, Katholieke Universiteit Leuven, Belgium</td>
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<tr>
<td><strong>Approaching basic mathematics in a non-conventional way</strong></td>
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<td>Erno Lehtinen, University of Turku, Finland; Minna M Hannula-Sormunen, University of Turku, Finland; Jake McMullen, University of Turku, Finland; Nonmanut Pongsakdi, University of Turku, Finland; Boglarka Brezovszky, University of Turku, Finland</td>
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<tr>
<th>Session A: 22</th>
<th>Time: 13:15-14:45</th>
<th>Location: Linna - Väinö Linna (K104)</th>
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</thead>
<tbody>
<tr>
<td><strong>SYMPOSIUM: SOCIO-COGNITIVE CONFLICT AND LEARNING: THE ROLE OF REGULATION, ARGUMENTATION AND MOTIVATION</strong></td>
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<td><strong>Chair</strong></td>
<td>The regulation of sociocognitive conflict: Consequences for learning and interpersonal relations</td>
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<td>Baruch Schwarz, Hebrew University of Jerusalem, Israel</td>
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<td><strong>Discussant</strong></td>
<td>Fabrizio Butera, University of Lausanne, Switzerland</td>
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<td>Anne-Nelly Perret-Clermont, University of Neuchâtel, Switzerland</td>
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<td>The role of argumentative discourse goals in mitigating my-side bias in the writing of arguments</td>
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<tr>
<td>Mark Felton, San Jose State University, United States; Amanda Crowell, Hunter College, City University of New York, United States</td>
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<td>Socio-cognitive conflict and conceptual change: Unrealistic hopes and suggestions for improvement</td>
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<td>Christa Asterhan, Hebrew University of Jerusalem, Israel</td>
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<td>Supporting socio-cognitive conflict awareness in SNS discussions groups: A social network analysis</td>
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<tr>
<td>Dimitra Tsoualtzi, Saarland University, Germany; Nikita Dutta, Saarland University, Germany; Thomas Puhl, Saarland University, Germany; Armin Weinberger, Saarland University, Germany</td>
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### SYMPOSIUM: PROFESSIONAL DEVELOPMENT OF STUDENT TEACHERS DURING THEIR FIELD EXPERIENCES

**Chair**
Dagmar Festner, University of Paderborn, Germany

**Discussant**
Margie W.J. van de Wiel, Maastricht University, Netherlands

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td><strong>Changes in learning-to-teach patterns of student teachers during long-term internships</strong></td>
<td>Dagmar Festner, University of Paderborn, Germany; Alexander Groeschner, Friedrich Schiller University Jena, Germany</td>
</tr>
<tr>
<td><strong>The development of educational knowledge during long-term internships in teacher education</strong></td>
<td>Sarah Mertens, University of Wuppertal, Germany; Cornelia Graesel, Bergische Universität Wuppertal, Germany</td>
</tr>
<tr>
<td><strong>Emotions in cooperative field experiences</strong></td>
<td>Tina Hascher, University of Bern, Switzerland; Lea de Zordo, University of Bern, Switzerland; Gerda Hagenauer, University of Bern, Switzerland</td>
</tr>
<tr>
<td><strong>Fostering student teachers’ deliberate practice: a school-based educators’ perspective</strong></td>
<td>Maaike Endedijk, University of Twente, Netherlands; Laríke Bronkhorst, Utrecht University, Netherlands</td>
</tr>
</tbody>
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### INVITED SYMPOSIUM: EFFECTS OF NON-INVASIVE BRAIN STIMULATION ON LEARNING

**Chairs**
Roland H. Grabner, University of Graz, Austria; Nienke van Attevelt, VU University Amsterdam, Netherlands

**Organisers**
Roland H. Grabner, University of Graz, Austria; Nienke van Attevelt, VU University Amsterdam, Netherlands

**Discussant**
Martijn Meerter, VU University Amsterdam, Netherlands

<table>
<thead>
<tr>
<th>Title</th>
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<tbody>
<tr>
<td><strong>The effect of brain stimulation on learning when taking into account the neural correlate</strong></td>
<td>Roi Cohen Kadosh, University of Oxford, United Kingdom</td>
</tr>
<tr>
<td><strong>Can Electrical Brain Stimulation (tES) Improve School-related Learning? A Meta-analysis</strong></td>
<td>Michael Schneider, University of Trier, Germany; Bianca Simonsmeier, University of Trier, Germany</td>
</tr>
<tr>
<td><strong>tES of the auditory cortex to enhance basic acoustic processing abilities in dyslexia</strong></td>
<td>Tino Zaehle, Otto von Guericke University Magdeburg, Germany</td>
</tr>
<tr>
<td><strong>tES for cognitive enhancement of healthy minors: A complex governance challenge</strong></td>
<td>Jantien Schuijër, VU University Amsterdam, Netherlands</td>
</tr>
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</table>
### Session A: 25
**Time:** 13:15-14:45  
**Location:** Pini B - B1097

**INVITED SYMPOSIUM: MEASURING AND SUPPORTING STUDENTS’ SELF-REGULATED LEARNING IN ADAPTIVE EDUCATIONAL TECHNOLOGIES**

**Chair**  
Inge Molenaar, Radboud University Nijmegen, Netherlands

**Organisers**  
Roger Azevedo, North Carolina State University, United States; Sanna Järvelä, University of Oulu, Finland; Maria Bannert, Technical University of Munich (TUM), Germany

**Discussant**  
Dragan Gasevic, University of Edinburgh, United Kingdom

**Multimodal data to measure students’ cognitive, metacognitive and motivation during learning**  
Sanna Järvelä, University of Oulu, Finland

**Combining and analyzing multimodal data**  
Maria Bannert, Technical University of Munich (TUM), Germany

**Challenges analyzing multimodal data**  
Dragan Gasevic, University of Edinburgh, United Kingdom

**Applications of multimodal data for instructional decision making**  
Roger Azevedo, North Carolina State University, United States

### Session A: 26
**Time:** 13:15-14:45  
**Location:** Main Building C - C7

**INVITED SYMPOSIUM: WHAT DO WE KNOW ABOUT ACADEMIC WORK TODAY?**

**Chair**  
Kirsi Pyhältö, Finland

**Discussant**  
Anna Sala-Bubaré, Ramon Llull University, Spain

**Writing and Faculty Identity Development**  
Montserrat Castelló, Ramon Llull University, Spain

**Forming academics in practice: acknowledging multiple trajectories and expectations**  
Angela Brew, Macquarie University, Australia; David Boud, University of Technology Sydney/Deakin University, Australia

**Dynamics of Decision Making in Grant Panels**  
Inge Van der weijden, Leiden University, Netherlands

**The completion of an interdisciplinary PhD and the professional trajectories**  
Karri Holley, University of Alabama, United States

**ANNOTATIONS:**  
**IMPORTANT NOTICE:** THIS SESSION WILL TAKE PLACE IN ROOM MAIN BUILDING A - A06.
### SINGLE PAPER: INSTRUCTIONAL DESIGN

**Chair**  
Marion Reindl, University of Augsburg, Germany

**A Meta-Analytic Review of Signaling Effects on Cognition and Learning**  
Maike Beige, Chemnitz University of Technology, Germany; Sascha Schneider, Chemnitz University of Technology, Germany; Steve Nebel, Chemnitz University of Technology, Germany; Günter Daniel Rey, Chemnitz University of Technology, Germany

**Promoting digital wisdom through students’ involvement in pedagogical design of an academic course**  
Tamar Shamir Inbal, Open University of Israel, Israel; Ina Blau, the Open University of Israel, Israel

**Learning from videos: Effects of Subtitles, Complexity, and Language proficiency**  
Tim van der Zee, Leiden University, Netherlands; Wilfried Admiraal, Leiden University, Netherlands; Fred Paas, Erasmus University Rotterdam/University of Wollongong, Netherlands; Nadira Saab, Leiden University, Netherlands; Bas Giesbers, Erasmus University Rotterdam, Netherlands

**Constructive Retrieval by Prompted Recall**  
Tino Endres, University of Freiburg, Germany; Shana Carpenter, Iowa State University, Department of Psychology, United States; Alf Martin, University of Freiburg, Institute of Psychology, Germany; Alexander Renkl, University of Freiburg, Institute of Psychology, Germany

### SINGLE PAPER: TEACHING AND INSTRUCTION

**Chair**  
Susan-Marie Harding, The University of Melbourne, Australia

**Developing better educational videogames: optimising gameplay and difficulty within leaderboards**  
Steve Nebel, Chemnitz University of Technology, Germany; Sascha Schneider, Chemnitz University of Technology, Germany; Maike Beige, Chemnitz University of Technology, Germany; Günter Daniel Rey, Chemnitz University of Technology, Germany

**Instruction after problem solving: Learning by elaborating on errors**  
Katharina Loibl, University of Education Freiburg, Germany; Timo Leuders, University of Education Freiburg, Germany

**Developing a framework for the teaching of collaborative talk**  
Ruth Newman, University of Exeter, United Kingdom

**Pedagogical Usability Assessment of Digital and Non-digital Learning Objects**  
Leonardo Madariaga, Pontificia Universidad Católica de Chile, Chile; Isabelle Burq, Pontificia Universidad Católica de Chile, Chile; Faustino Marañon, Pontificia Universidad Católica de Chile, Chile; Miguel Nussbaum, Pontificia Universidad Católica de Chile, Chile
### Session B: 3
**Time:** 15:15-16:45  
**Location:** Main Building E - E222

#### SINGLE PAPER: SOCIAL INTERACTION IN LEARNING AND INSTRUCTION - G

**Chair**  
Hanni Muukkonen, University of Oulu, Finland

**Teachers’ insights on connected learning networks: Emerging activities and forms of participation**  
Henriikka Vartiainen, University of Eastern Finland, Finland; Saara Nissinen, University of Eastern Finland, Finland; Sinikka Pöllänen, University of Eastern Finland, Finland, Finland; Petteri Vanninen, University of Eastern Finland, Finland

**Prerequisites of Primary School Students’ Attitudes Towards Peers with Social or Emotional Disorders**  
Marwin Felix Löper, Paderborn University, Germany; Frank Hellmich, Paderborn University, Germany

**Scaffolding Mathematics Discussion vs Conventional Teacher Help in a Collaborative Setting**  
Sharon Calor, University of Amsterdam, Netherlands; Rijkje Dekker, University of Amsterdam, Netherlands; Jannet van Drie, University of Amsterdam, Netherlands; Bonne Zijlstra, University of Amsterdam, Netherlands; Monique Volman, University of Amsterdam, Netherlands

**Nature as a Setting and Resource to Promote Learners’ Agency and Competences in Education**  
Marjaana Kangas, University of Lapland, Finland; Hanna Vuojärvi, University of Lapland, Finland; Pirikko Sikkander, University of Lapland, Finland

### Session B: 4
**Time:** 15:15-16:45  
**Location:** Main Building D - D13

#### SINGLE PAPER: ATTITUDES AND BELIEFS

**Chair**  
Fredrik Mark Rækenes, Norwegian University of Science and Technology, Norway

**A Phenomenographic and Variation Theory Study of Lower Secondary Students’ Personal Finance**  
Hua Loon Ling, The University of Hong Kong, Hong Kong

**Describing the internal and external horizons: evidence from graduates’ conceptions of price**  
Guy Durden, University College London, United Kingdom

**The Accuracy of Teacher Expectations: Implications for Equal Educational Opportunities**  
Christine Rubie-Davies, University of Auckland, New Zealand; Kane Meissel, University of Auckland, New Zealand

**School Stress among Sixth-Grade Students – Associations with Academic Buoyancy and Temperament**  
Rikka Hirvonen, University of Jyväskylä, Finland; Laura Yli-Kivistö, University of Jyväskylä, Finland; Timo Ahonen, University of Jyväskylä, Finland; Noona Kuuru, University of Jyväskylä, Finland

**Annotations:**  
The presentation by Guy Durden (Describing the internal and external horizons: evidence from graduates’ conceptions of price) is cancelled.
### Session B: 5
**Time:** 15:15-16:45  
**Location:** Pinni A - Paavo Koli

#### SINGLE PAPER: MOTIVATION AND EMOTION

**Chair**  
Carla Quesada-Pallarés, Spain

**When parents support students’ choices: Parents’ role in students’ choice of a high school major**  
Idit Katz, Ben-Gurion University of the Negev, Israel; Moran Green-Cohen, Ben-Gurion University of the Negev, Israel; Rinat Cohen, Ben Gurion University of the Negev, Israel; Suzi Morsiano-davidpur, Ben-Gurion University of the Negev, Israel

**Is Confusion leading to frustration or engagement? An emote-aloud study on achievement emotions**  
Hannes Muenchow, University of Würzburg, Germany; Christoph Sonnenberg, University of Wuerzburg, Germany; Maria Bannert, Technical University of Munich (TUM), Germany

**Developmental Interplay of Temperament and Motivation During the Early School Years**  
Anna Rawlings, University of Helsinki, Finland; Anna Tapola, University of Helsinki, Finland; Markkku Niemivirta, University of Oslo, Norway

**The effect of classroom processes on reading comprehension: the mediating role of mastery goals**  
Desiree Theis, German Institute for International Educational Research (DIPF), Germany; Natalie Fischer, Universität Kassel, Germany

**ANNOTATIONS:**  
THIS SESSION IS CHAIRED BY TIM CORCORAN. CARLA QUESADA PALLARES WILL CHAIR SESSION P: 11.

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### Session B: 6
**Time:** 15:15-16:45  
**Location:** Main Building D - D11

#### SINGLE PAPER: TEACHER PROFESSIONAL DEVELOPMENT

**Chair**  
Thomas Gallagher-Mitchell, Liverpool Hope University, United Kingdom

**On the path to dialogic teaching: Learnings from action research**  
Klara Sedova, Masaryk University, Czech Republic; Roman Svalaček, Masaryk University, Faculty of Arts, Czech Republic; Zuzana Šalamounová, Department of Educational Sciences, Faculty of Arts, Masaryk University, Czech Republic

**Pedagogy under pressure? Primary school teachers’ perceptions of their pedagogical actions.**  
Michelle Gemmink, University of Groningen / Katholieke Pabo Zwolle, Netherlands; Marjon Fokkens-Bruinsma, University of Groningen, Netherlands; Ietje Pauw, Katholieke Pabo Zwolle, Netherlands; Klaas van Veen, University of Groningen, Netherlands

**Changing pedagogies and practices with digital storytelling: from teachers’ perspective**  
Marianna Vivitsou, University of Helsinki, Finland; Hannele Niemi, University of Helsinki, Finland; Veera Kallunki, University of Helsinki, Finland

**Making sense and enhancing teachers’ collaborative expertise of school well-being**  
Tuula Ukskoski, University of Jyväskylä, Finland
## SINGLE PAPER: LEARNING AND PROFESSIONAL DEVELOPMENT

**Chair**
Kylie Shaw, SORTI, The University of Newcastle, Australia

**Team learning and innovative work behaviour in vocational teacher teams**
Andreas Widmann, University of Regensburg, Germany; Regina Mulder, University of Regensburg, Germany

**Intergenerational relationships in elementary school teams. A social network approach**
Kendra Geeraerts, University of Antwerp, Belgium; Jan Vanhoof, University of Antwerp, Belgium; Piet Van den Bossche, University of Antwerp, Belgium; Nienke Moolenaar, University of Antwerp, Belgium

**Images of the possible: Leaders’ effective interpersonal behaviours in difficult conversations**
Frauke Meyer, University of Auckland, New Zealand; Deidre Le Fevre, University of Auckland, New Zealand

**The role of physicians’ experience in experiencing gut feelings in diagnosing ambiguous cases**
Margje W.J. van de Wiel, Maastricht University, Netherlands; Erik Stolper, Maastricht University, Netherlands

## SINGLE PAPER: TEACHING AND INSTRUCTIONAL APPROACHES

**Chair**
Maida Mustafic, University of Luxembourg, Luxembourg

**Physiological synchrony during monitoring in collaborative learning**
Märta Sobocinski, University of Oulu, Finland; Jonna Malmberg, University of Oulu, Finland; Sanna Järvelä, University of Oulu, Finland

**Teachers’ awareness of students’ misconceptions in astronomy. A qualitative analysis in Belgium**
An Steegen, KU Leuven, Belgium; Marjolein Cox, KU Leuven, Belgium; Mieke De Cock, KU Leuven, Belgium

**Designing videos for learning: Separating the good from the bad and the ugly**
Jason Lodge, The University of Melbourne, Australia; Jared Horvath, University of Melbourne, Australia; Alex Horton, University of Melbourne, Australia; Sven Venema, Griffith University, Australia; Gregor Kennedy, University of Melbourne, Australia; Shane Dawson, University of South Australia, Australia

**Digital procrastination in secondary schools: triggers and enabling conditions**
Thomas Amesen, Western Norway University of Applied Sciences, Norway; Eyvind Elstad, University of Oslo, Norway; Elaine Munthe, Stavanger University College, United States

**Annotations:**
This session is chaired by Eileen Lübcke, replacing Maida Mustafic.

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**TUESDAY, 29 AUGUST 2017**
### SINGLE PAPER: ASSESSMENT AND EVALUATION

**Chair**  
Elena Makarova, University of Applied Sciences and Arts Northwestern Switzerland, Switzerland

**Coordinated Assessment Design to Explore the Relationship of Teacher Knowledge to Teaching Quality**  
Drew Gitomer, Rutgers University, United States; Courtney Bell, Educational Testing Service, United States

**Thin-Slice Judgements as a Measurement of Instruction Quality**  
Lukas Begrich, Goethe-Universität Frankfurt, Germany

**How is performance assessment in education set out and its quality measured? A systematic review**  
Liesje Coertjens, Université catholique de Louvain (UCL), Belgium; Karen Verswijvel, University of Antwerp, Belgium; Alexia Deneire, Antwerp University, Belgium; Jetje De Groof, University of Antwerp, Belgium; Sven De Maeyer, University of Antwerp, Belgium

**Accuracy of teachers’ judgments of students with consistent and inconsistent profiles**  
Anna-Katharina Praetorius, German Institute for International Educational Research (DIPF), Germany; Anna Suedkamp, TU Dortmund University, Germany; Birgit Spinath, Heidelberg University, Germany

**Annotations:**  
The presentation by Liesje Coertjens (How is performance assessment in education set out and its quality measured? A systematic review) is cancelled and replaced by Marie Lejon (Physical and virtual spaces in higher education).

### SINGLE PAPER: LEARNING AND INSTRUCTION WITH COMPUTERS

**Chair**  
Martin Merkt, Leibniz-Institut für Wissensmedien, Germany

**Interpersonal skills in CSCL-environments: Do they predict student individual and group performance?**  
Bert Slof, Utrecht University, Netherlands; Jeroen Janssen, Utrecht University, Netherlands; Danique Nijdam, University Utrecht, Netherlands

**The road to hell is paved with good intentions, but what happens to them along the way?**  
Maartje Hendriks, Open University of the Netherlands, Netherlands; Karel Kreijns, Open University of the Netherlands, Netherlands; Marco Kaiz, Open University of the Netherlands, Netherlands

**Object-oriented learning activities to innovate Higher Education: a case-study**  
Nadia Sansone, Sapienza University of Rome, Italy; Donatella Cesareni, University of Rome, Italy

**Children’s scientific thinking skills for programming a robotic car**  
Eva van de Sande, Radboud University Nijmegen, Netherlands; Tija Kleemans, Radboud University Nijmegen, Netherlands; Ludo Verhoeven, Radboud University Nijmegen, Netherlands; Eliane Segers, Radboud University Nijmegen / University of Twente, Netherlands

**Annotations:**  
The presentation by Maartje Hendriks (The road to hell is paved with good intentions, but what happens to them along the way?) is cancelled.
**Session B: 11**

**Time:** 15:15-16:45  
**Location:** Main Building C - C8

### SINGLE PAPER: SOCIAL INTERACTION IN LEARNING AND INSTRUCTION

**Chair**  
Frederik Ahlgrim, University of Potsdam, Germany

**Positive effects of physical and mindfulness training on children’s attention and academic skills**  
Christian Müller, Goethe-University Frankfurt, Germany; Sven Lindberg, Deutsches Institut für Internationale Pädagogische Forschung (DIPF), Germany; Viktoria Sawitzki, Goethe University Frankfurt, Germany; Priyangya Kanagalingam, Goethe University Frankfurt, Germany; Steffen Scherer, Deutsches Institut für Internationale Pädagogische Forschung (DIPF), Germany; Christoph Mickel, Goethe-Universität Frankfurt, Germany

**Impact of parental beliefs and teacher expectations on mono- and multilingual students’ achievement**  
Edith Niederbacher, University of Applied Sciences and Arts Northwestern Switzerland, Switzerland; Markus P. Neuenschwander, University of Applied Sciences and Arts Northwestern Switzerland, Switzerland

**It is great she is really checking she wants us to pass – Facilitating student project work**  
Anders Eklof, Kristianstad University, Sweden; Tina Kullenberg, Kristianstad University, Sweden; Lars-Erik Nilsson, Kristianstad University, Sweden

**Applying analytics to multimodal data: Methodological challenges and opportunities**  
Jonathan White, Dalarna University, Sweden; Sangeeta Bagga-Gupta, Jönköping University, Sweden; Giulia Messina Dahberg, University of Skövde, Sweden

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**Session B: 12**

**Time:** 15:15-16:45  
**Location:** Pinni B - B3109

### SINGLE PAPER: SOCIAL INTERACTION

**Chair**  
Gerda Hagenauer, University of Bern, Switzerland

**Shaping participation in vocational training interactions: the case of schisming**  
Laurent Fillietaz, University of Geneva, Switzerland; Vassiliki Markaki, University of Grenoble, France

**Exploring How Wiki-blogs are constituted as Learning Resources in a Science Project**  
Astrid Camilla Wig, University College of Southeast Norway, Norway; Anne Line Wittek, University of Oslo, Norway

**Integration and language acquisition: a link built by governmental program’s makers and other actors**  
Stéphanie Ballat, University of Lausanne, Switzerland

**Professional identity management in a thematic Facebook group**  
Louise Peterson, University of Gothenburg, Sweden; Annika Lantz-Andersson, University of Gothenburg, Sweden; Thomas Hillman, University of Gothenburg, Sweden; Annika Bergviken-Rensfeldt, University of Gothenburg, Sweden; Mona Lundin, University of Gothenburg, Sweden

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**ANNOTATIONS:**  
THE PRESENTATION BY LAURENT FILLIETAZ (SHAPING PARTICIPATION IN VOCATIONAL TRAINING INTERACTIONS: THE CASE OF SCHISING) IS MOVED TO SESSION B: 30 AND REPLACED BY EVA VASS (EMBODIED DIALOGUES, CREATIVE INTERSUBJECTIVITIES).
### Session B: 13
**Time:** 15:15-16:45  
**Location:** Linna - K109

**SINGLE PAPER: METACOGNITION**

| Chair | Confidence- and conflict-based regulation in individual and collaborative learning  
|-------|------------------------------------------------------------------  
|       | Lenka Schnaubert, University of Duisburg-Essen, Germany; Daniel Bodemer, University of Duisburg-Essen, Germany  
|       | Modelling the Dual Nature of Epistemic Beliefs  
|       | Samuel Merk, University of Tübingen, Germany; Tom Rosman, Leibniz Institute for Psychology Information, Germany  
|       | A Cognitive Diagnostic Model: High-order Thinking and Metacognition involved in Mathematics  
|       | Tahsin Olguz Başokçu, Ege University, Turkey; M. Akif Guzel, Middle East Technical University Northern Cyprus Campus, Turkey  
|       | Challenges in an Online Collaboration: Effects of Scripting Shared Task Perceptions  
|       | Ashish Bakhtiar, University of Victoria, Canada; Allyson Hadwin, University of Victoria, Canada; Mariel Miller, University of Victoria, Canada; Rebecca Edwards, University of Victoria, Canada; Todd Milford, University of Victoria, Canada |  

### Session B: 14
**Time:** 15:15-16:45  
**Location:** Pinni A - A1081

**SINGLE PAPER: MORAL AND DEMOCRATIC EDUCATION**

| Chair | Is democratic agency possible? How an international school network puts its 'IDEALS' into practice  
|-------|------------------------------------------------------------------  
|       | Rupert Higham, University of Cambridge, United Kingdom; Natalie Djohari, Visiting Research Fellow, Goldsmiths' College, University of London, United Kingdom  
|       | A comprehensive framework for assessing college students’ reactions to faculty incivility  
|       | Dorit Alt, Kinneret College on the Sea of Galilee, Israel; Yariv Itzkovich, Kinneret College on the Sea of Galilee, Israel  
|       | Shaping the Resilient Subject: Professional Interventions, Culture and Politics in Israeli Schools  
|       | Galia Plotkin Amrami, Ben-Gurion University of the Negev, Israel  
|       | Children’s epistemic beliefs for moral reasoning in elementary school: a longitudinal study  
|       | Jo Lunn Brownlee, Queensland University of Technology, Australia; Susan Walker, Queensland University of Technology, Australia; Eva Johansson, University of Stavanger, Norway; Laura Scholes, Queensland University of Technology (QUT), Australia; Donna Berthelsen, Queensland University of Technology, Australia |
### Session B: 15  |  Time: 15:15-16:45  |  Location: Pinni B - B3118

**SINGLE PAPER: METACOGNITION - B**

| Chair | Misconceptions Impede Text Comprehension and Metacomprehension Accuracy in the Domain of Statistics  
Anja Prinz, University of Freiburg, Germany; Stefanie Golke, University of Freiburg, Germany; Joerg Wittwer, University of Freiburg, Germany  
Does visualization affect text comprehension monitoring, restudy choice, and comprehension scores?  
Danny Kostons, University of Groningen, Netherlands; Björn de Koning, Erasmus University Rotterdam, Netherlands  
Immediate and Long-Term Effects of Training in 'Learning by Teaching' on Knowledge of Cognition  
Mary Gutman, Efhrata College, Israel  
Help-seeking and private speech during a problem-solving task in 2-5 year olds  
Loren Marulis, Connecticut College, United States; Lindsey Nelson, Connecticut College, United States |

### Session B: 16  |  Time: 15:15-16:45  |  Location: Pinni B - B0039

**SINGLE PAPER: ARGUMENTATION, DIALOGUE AND REASONING**

| Chair | The Argumentation Rating Tool: Supporting Systematic Reflection on the Quality of Classroom Talk  
Alina Reznitskaya, Montclair State University, United States; Ian A.G. Wilkinson, The Ohio State University, United States  
Effects of learning about evolution on religious belief: Israeli schools as a natural experiment  
Eli Gottlieb, Mandel Leadership Institute, Israel  
The Development of Relational Reasoning in Children and Youth  
Patricia A. Alexander, University of Maryland, United States; Sophie Jablansky, University of Maryland, United States  
A perfect match? Studying the role of source expertise and evidence type in claim evaluation  
Eva Thomm, University of Erfurt, Germany; Rainer Bromme, University of Münster, Germany |

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**TUESDAY, 29 AUGUST 2017**
**Session B: 17**

| Location: Main Building A - A3 |

**SINGLE PAPER: HIGHER EDUCATION - C**

**Chair**
Niklas Harring, University of Gothenburg, Sweden

**Do students’ subjective theories agree with Boekaerts’ Dual Processing Self-Regulation Model?**
Sarah Grabler, Paris-Lodron University Salzburg, Austria; Jean-Luc Patry, University of Salzburg, Austria

**Challenges of student leaders as facilitators in learning communities**
Spencer Carlson, Northwestern University, United States; Daniel Rees Lewis, Northwestern University, United States; Matthew Easterday, Northwestern University, United States; Elizabeth Gerber, Northwestern University, United States

**Combining campus education with a MOOC: the case of an Innovation Management course**
Bas Giesbers, Rotterdam School of Management, Erasmus University, Netherlands; Serge Rijndijk, Delft University of Technology, Netherlands; Sandra Langeveld, Rotterdam School of Management, Erasmus University, Netherlands

**Student Perspectives on the Transition to Proof in Collegiate Mathematics**
Mariana Levin, Western Michigan University, United States; John P. Smith, III, Michigan State University, United States; Younggon Bae, Michigan State University, United States; V. Rani Satyam, Michigan State University, United States

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**Session B: 18**

| Location: Pinni B - B4117 |

**SINGLE PAPER: MORAL AND DEMOCRATIC EDUCATION - B**

**Chair**
Clare Newton, The University of Melbourne, Australia

**Emotional/moral episodes in university teaching: authenticity, authority, respect and loyalty**
Kathleen M. Quinlan, University of Kent, United Kingdom

**Task dependency of citizenship entitlement through education for responsible research and innovation**
Eleni Kyza, Cyprus University of Technology, Cyprus; Yiannis Georgiou, Cyprus University of Technology, Cyprus; Andreas Hadjichambis, Cyprus Center for Environmental Research & Education, Cyprus; Andria Agesilaou, Cyprus University of Technology, Cyprus

**Environmental attitudes in parents and students – a cross-cultural comparison**
Nina Roczen, German Institute for International Educational Research (DIPF), Germany; Nina A. Jude, German Institute for International Educational Research (DIPF), Germany; Sonja Bayer, German Institute for International Educational Research (DIPF), Germany

**Assessing Moral Emotions and Moral Functioning - Moving beyond the Happy Victimizer Paradigm**
Eveline Gutzwiller-Helfenfinger, University of Teacher Education of Lucerne, Switzerland; Brigitte Latzko, University of Leipzig, Germany; Carmen Amrein, University of Teacher Education of Lucerne, Switzerland; Romy Schneider, University Leipzig, Germany; Lydia Küttner, University Leipzig, Germany; Anne-Mareike Möller, University of Leipzig, Germany
**Session B: 19**

**Time:** 15:15-16:45  
**Location:** Linna - Väinö Linna (K104)

### SINGLE PAPER: NUMERACY, STEM AND VALUES EDUCATION

**Chair**  
Anja Linberg, University of Bamberg, Germany

- **Do Mathematically Skilled Adults Have a Sense for Irrational Numbers?**  
  Andreas Obersteiner, University of Education Freiburg, Germany; Veronika Hofreiter, Technical University of Munich, Germany

- **Coherence in Pluralistic Societies and Public Education. A Framework Based on Rawls and Habermas**  
  Manfred L. Pirner, University of Erlangen-Nuremberg, Germany

- **The Effect of an Integrated STEM Intervention on Attitudes towards STEM**  
  Haydée De Loof, University of Antwerp, Belgium; Annemie Struyf, University of Antwerp, Belgium; Jelle Boeve-de Pauw, University of Antwerp, Belgium; Peter Van Petegem, University of Antwerp, Belgium

- **Learning to know how many six are: a preschool intervention study about the relationship of numbers**  
  Camilla Björklund, University of Gothenburg, Sweden; Angelika Kullberg, University of Gothenburg, Sweden

**Annotations:**  
ANJA LINBERG WILL CHAIR SESSION 0:7 AND IS REPLACED BY BOBBY HOFFMAN.  
THE PRESENTATION BY MANFRED L. PIRNER (COHERENCE IN PLURALISTIC SOCIETIES AND PUBLIC EDUCATION. A FRAMEWORK BASED ON RAWLS AND HABERMAS) IS MOVED TO SESSION N. 4.

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**Session B: 20**

**Time:** 15:15-16:45  
**Location:** Pinni B - B1096

### SINGLE PAPER: HIGHER EDUCATION - H

**Chair**  
Esther Ziegler, ETH Zurich, Switzerland

- **The impact of space on teaching - exploring ways to investigate teaching from a spatial perspective**  
  Rie Troelsen, University of Southern Denmark, Denmark

- **Do Students' Understandings of Graduate Student Attributes align with Academics' Understandings?**  
  Heather Kanuka, University of Alberta, Canada; Samira ElAtia, University of Alberta, Canada; Summer Cowley, The University of Alberta, Canada; Jason Holmes, The University of Alberta, Canada

- **Multi-drafting and procrastination in online learning among L1 and L2**  
  Miriam Sarid, Western Galilee College, Israel; Yehuda Peled, Western Galilee College, Israel; Vered Vaknin, Western Galilee College, Israel

- **Active learning methods in higher education (STEM): Systematic literature review**  
  Susanna Hartikainen, Tampere University of Technology, Finland; Laura Pylväs, University of Tampere, Finland; Heta Rintala, Tampere University of Technology, Finland; Petri Nokelainen, Tampere University of Technology, Finland
# SINGLE PAPER: ASSESSMENT AND EVALUATION - D

**Chair**
Lynne Wyness, University of Plymouth, United Kingdom

**Evaluation of Complex Essay Writing Skills at Upper Secondary Level – Results from the MEWS study**
Oliver Meyer, University of Applied Sciences Northwestern Switzerland, Switzerland; Maleika Krüger, University of Applied Sciences Northwestern Switzerland, Switzerland; Stefan Keller, School of Teacher Education Basel, Switzerland

**Student roles in effective and ineffective feedback**
David Boud, University of Technology Sydney/ Deakin University, Australia; Phillip Dawson, Deakin University, Australia; Michael Henderson, Monash University, Australia; Traci Ryan, Monash University, Australia; Michael Phillips, Monash University, Australia

**Examining Dimensionality in Word Problem Performance and Difficulty of Word Problem Types**
Nonmanut Pongsakdi, University of Turku, Finland; Anu Kajamies, University of Turku, Finland; Koen Veermans, University of Turku, Finland; Minna Hannula-Sormunen, University of Turku, Finland; Kalle Lertola, University of Turku, Finland; Marja Vauras, University of Turku, Finland; Erno Lehtinen, University of Turku, Finland

**Assessment and feedback in Higher Education: Findings from an empirical study in Portugal**
Diana Pereira, University of Minho, Portugal; Maria A. Flores, University of Minho, Portugal; Ana Veiga Simão, Faculty of Psychology, University of Lisbon, Portugal; Alexandra Barros, University of Lisbon, Portugal

**ANNOTATIONS:**
This session will be chaired by Tapani Innanen, replacing Lynne Wyness.

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# SINGLE PAPER: TEACHING AND TEACHER EDUCATION - R

**Chair**
Marit Annalena Lindner, Leibniz Institute for Science and Mathematics Education (IPN), Germany

**Embedding Literacy in Initial Teacher Education**
Kirsten Hutchison, Deakin University, Australia; Anne Coonan, Deakin University, Australia; Louise Paatsch, Deakin University, Australia; Glenn Auld, Deakin University, Australia; Maria Nicholas, Deakin University, Australia; Andrew Eyers, Deakin University, Australia; Angela McNiven, Deakin University, Australia

**Designing and evaluating content of physics instruction: Conceptual groundings of electric field**
Terhi Mäntylä, University of Tampere, Finland; Maija Nousiainen, University of Helsinki, Finland

**Mentor teacher’s interventions during student teacher’s lessons: Can we predict these?**
Frans Prins, Utrecht University, Netherlands; Marieke Jaspers, Utrecht University, Netherlands; Paulien Meijer, Radboud University Nijmegen, Netherlands; Theo Wubbels, Utrecht University, Netherlands

**Pre-service students’ reading trajectories**
Anna-Karin Svensson, Malmö University, Sweden
### Session B: 23
**Time:** 15:15-16:45  
**Location:** Virta - 120

**SYMPOSIUM: ANALYZING AND VISUALIZING THE DYNAMIC ASPECTS OF AFFECT AND COGNITION ACROSS CONTEXTS**

<table>
<thead>
<tr>
<th>Chairs</th>
<th>Cognitive Metacognitive and Affective Processes during Learning with an Intelligent Virtual Human</th>
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</thead>
<tbody>
<tr>
<td>Roger Azevedo, North Carolina State University, United States; Julien Mercier, Canada</td>
<td>Roger Azevedo, North Carolina State University, United States; Nicholas Mudrick, North Carolina State University, United States; Michelle Taub, North Carolina State University, United States; Garrett C. Millar, North Carolina State University, United States; Amanda E. Bradbury, North Carolina State University, United States; Megan J. Price, North Carolina State University, United States</td>
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</table>

**Discussant**  
Reinhard Pekrun, Ludwig-Maximilians-Universität (LMU), Germany

<table>
<thead>
<tr>
<th>How physiological data visualizations can be used to track socially shared regulation of learning</th>
<th>Visualizations to support Self Regulated Learning based on data from Adaptive Education Technologies</th>
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</thead>
<tbody>
<tr>
<td>Jonna Malmberg, University of Oulu, Finland; Sanna Järvelä, University of Oulu, Finland; Ilkka Juuso, University of Oulu, Finland; Iman Alkhani, University of Oulu, Finland; Tapio Seppät, University of Oulu, Finland</td>
<td>Inge Molenaar, Radboud University Nijmegen, Netherlands</td>
</tr>
</tbody>
</table>

**Conceptual & methodological challenges in studying the interplay of affect and cognition in learning**  
Julien Mercier, University of Quebec (Montreal), Canada; Pierre Chalfoun, User Research Lab – Ubisoft Montreal, Canada; Babak Khosravifar, University of Quebec in Montreal, Canada; Kamran Shaikh, University of Quebec in Montreal, Canada

### Session B: 24
**Time:** 15:15-16:45  
**Location:** Pinni B - B3116

**SYMPOSIUM: THE NUMBER LINE REVISITED: NEW INSIGHTS INTO STRATEGY USE AND TRAINING**

<table>
<thead>
<tr>
<th>Chair</th>
<th>Number Line Estimations: An exploration of children’s response strategies</th>
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<tbody>
<tr>
<td>Anne van Hoogmoed, University of Groningen, Netherlands</td>
<td>Victoria Simms, Ulster University, United Kingdom; John Towse, Lancaster University, United Kingdom; Kevin Muldoon, Herriot Watt University, United Kingdom</td>
</tr>
</tbody>
</table>

**Discussant**  
Evelyn Kroesbergen, Utrecht University, Netherlands

<table>
<thead>
<tr>
<th>The effect of labeled benchmarks on number line estimations</th>
<th>Strategy use in bounded and unbounded number lines in MLD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elke Sekeres, KU Leuven, Belgium; Dominique Peeters, KU LEUVEN, Belgium; Lieven Verschaffel, KU Leuven, Belgium; Koen Luwel, KU Leuven, Belgium</td>
<td>Anne van Hoogmoed, University of Groningen, Netherlands; Evelyn Kroesbergen, Utrecht University, Netherlands</td>
</tr>
</tbody>
</table>

**Using a game-based number line estimation task to assess conceptual fraction knowledge**  
Korbinian Moeller, Leibniz-Institut für Wissensmedien, Germany; manuel Ninaus, Leibniz-Institut für Wissensmedien (IWM), Germany; Kristian Kilii, Tampere University of Technology, Finland; Jake McMullen, University of Turku, Finland
### SYMPOSIUM: RESEARCH COMPETENCE AS PART OF SCIENTIFIC THINKING IN UNIVERSITY EDUCATION

**Chair**  
Tuike Iskala, University of Turku, Finland

**Discussant**  
Heidi Hyttinen, University of Helsinki, Finland

- **Undergraduates’ Conceptions of Research Methods Learning**  
  Kieran Ballow, University of Roehampton, United Kingdom

- **First Year College Students’ Emerging Understandings of Evidence**  
  Kieran Ballow, University of Roehampton, United Kingdom; Rebecca Shargel, Towson University, United States; Lisa Twiss, Towson University, United States

- **Teacher education students’ conceptions of theory**  
  Margaret Kiley, Australian National University, Australia; Heidi Salmento, University of Turku, Finland

- **Towards a theory of scientific thinking in higher education including research competence**  
  Mari Murtonen, University of Turku, Finland

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### SYMPOSIUM: UNDERSTANDING VARIABILITY IN MATH ANXIETY AND ITS IMPACT ON MATH PERFORMANCE

**Chair**  
Delphine Sasanguie, KU LEUVEN, Belgium

**Discussant**  
Kinga Morsanyi, Queen’s University Belfast, United Kingdom

- **Investigation of the specificity of math anxiety, using both implicit and explicit measures**  
  Eva Schmitz, University of Amsterdam, Netherlands; Brenda Jansen, University of Amsterdam, Netherlands; Reinout Wiers, University of Amsterdam, Netherlands; Elske Salemink, University of Amsterdam, Netherlands

- **Maths anxiety and other anxiety forms in secondary school performance**  
  Emma Carey, University of Cambridge, United Kingdom; Denes Szucs, University of Cambridge, United Kingdom

- **Variability and Effects of Preservice Preschool Teachers’ Math Anxiety during the Exam Period**  
  Lars Jenßen, Freie Universität Berlin, Germany; Oliver Thiel, Dronning Mauds Minne Høgskole, Norway

- **The impact of playing a math game at home on children’s math anxiety and math performance**  
  Delphine Sasanguie, KU Leuven, Belgium; Fien Depaepe, KU Leuven, Belgium
# INVITED SYMPOSIUM: CLOSING THE GAPS? DIFFERENTIAL EDUCATIONAL EFFECTIVENESS AS A ROAD TO SCHOOL IMPROVEMENT

<table>
<thead>
<tr>
<th><strong>Chair</strong></th>
<th>Sigrid Blømeke, University of Oslo, Norway</th>
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<td><strong>Organiser</strong></td>
<td>Sigrid Blømeke, University of Oslo, Norway</td>
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<tr>
<td><strong>Discussants</strong></td>
<td>Ronny Scherer, University of Oslo, Norway; Trude Nilsen, University of Oslo, Norway</td>
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</table>

### Differential Teacher and School Effectiveness Research: Implications for Promoting Equity
Leonidas Kyriakides, University of Cyprus, Cyprus; Bert (Hubertus P M) Creemers, University of Groningen / GION, Netherlands

### Evaluating teaching quality: The validity of differentiating performance using multiple measures
Sandy Taut, Pontificia Universidad Católica de Chile, Chile; Daniela Jiminez, Pontificia Universidad Católica de Chile, Chile; Jorge Manzi, Pontificia Universidad Católica de Chile, Chile; Diego Palacios, Pontificia Universidad Católica de Chile, Chile

### Combating Disadvantage in the Early Years: Evaluating the impact of Children’s Centres
Pamela Sammons, University of Oxford, United Kingdom; James Hall, University of Oxford, United Kingdom; Rebecca Smees, University of Oxford, United Kingdom; Jenny Goff, University of Oxford, United Kingdom; Kathy Sylva, University of Oxford, United Kingdom

### When does(n’t) collaboration work? Evidence on school-to-school collaboration as a strategy
Daniel Muijs, University of Southampton, United Kingdom
<table>
<thead>
<tr>
<th>Session B: 28</th>
<th>Time: 15:15-16:45</th>
<th>Location: Main Building A – A32</th>
</tr>
</thead>
</table>

**SYMPOSIUM: FOCUSING (ON) TEACHER ATTENTION AND LEARNING**

**Chair**  
Hilary Hollingsworth, Australian Council for Educational Research, Australia

**Discussant**  
Valeska Grau, Pontificia Universidad Católica de Chile, Chile

**Learning from Lessons: Studying the structure and construction of teacher knowledge**  
Doug Clarke, Australian Catholic University, Australia; Man Ching Esther Chan, The University of Melbourne, Australia; David Clarke, University of Melbourne, Australia; Anne Roche, Australian Catholic University, Australia

**Using head-mounted video to investigate the attentional focus of primary mathematics teachers**  
Carmel Mesiti, University of Melbourne, Australia; Dan Jazby, The University of Melbourne, Australia; David Clarke, University of Melbourne, Australia

**Focusing teacher attention through the framing of salience: The structured stimulation of reflection**  
Hilary Hollingsworth, Australian Council for Educational Research, Australia

**Focusing Teacher Attention and Learning through Culturally Embedded Lesson Study in the Philippines**  
David Clarke, University of Melbourne, Australia; Marlon Ebaeguin, University of the Philippines Diliman, Philippines
**POSTER PRESENTATION: PO: TEACHER PROFESSIONAL DEVELOPMENT**

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<tr>
<th>Chair</th>
<th>The projection of the past in the identity formation of teachers with learning disability</th>
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<tr>
<td>Jelena Radisic, University of Oslo, Norway</td>
<td>Regina Benchetrit, Ben Gurion University / Kaye Academic College of Education, Israel; Idit Katz, Ben-Gurion University of the Negev, Israel</td>
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<tr>
<th>Learning to cultivate creativity: a dual perspective of student-teachers’ and pupils’ learning</th>
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<tr>
<td>Paulien Meijer, Radboud University Nijmegen, Netherlands; Ida Oosterheert, Nijmegen University, Netherlands</td>
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<tr>
<th>Coherence in mathematics teacher education</th>
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<tr>
<td>Andreas Ostermann, University of Education Freiburg, Germany; Timo Leunders, University of Education Freiburg, Germany; Michael Besser, Leuphana University of Lüneburg, Germany</td>
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<tr>
<th>Effectiveness of researcher- and teacher-trained teachers in the domain of reading</th>
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<tr>
<td>Jacqueline Evers-Vermeul, Utrecht University, Netherlands; José van der Hoeven, CED Groep, Netherlands</td>
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<th>From Lone Wolf to Team player: Co-Constructive Cooperation between Teachers in Personalized Teaching</th>
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<td>Marco Galle, University of Zurich, Switzerland; Rita Stebler, University of Zurich, Switzerland</td>
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<th>Towards Personalized Learning – School and Teaching Development in one State School</th>
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<td>Marco Galle, University of Zurich, Switzerland; Kurt Reusser, University of Zurich, Switzerland</td>
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<td>Erno Lehtinen, University of Turku, Finland</td>
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### POSTER PRESENTATION: PO: TEACHER EDUCATION

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<tr>
<th>Chair</th>
<th>Teachers’ growth or fixed mindsets and the appraisal of achievement in the context of feedback</th>
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<tr>
<td></td>
<td>Emmy de Kraker-Pauw, VU University Amsterdam, Netherlands; Lydia Krabbendam, Vrije Universiteit Amsterdam, Netherlands; Nienke van Atteveldt, VU University Amsterdam, Netherlands; Floyt Van Wesel, Utrecht University, Netherlands</td>
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<td>Using self-evaluation in post-observation conferences between museum educators and museum docents</td>
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<td>Mark Schep, University of Amsterdam, Netherlands; Carla Van Boxtel, University of Amsterdam, Netherlands; Julia Noordegraaf, University of Amsterdam, Netherlands</td>
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<td></td>
<td>Teacher-student relationships: comparing Dutch academic and nonacademic primary school teachers</td>
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<td>Sanne Dijkema, University of Groningen, Netherlands; Simone Doolaard, University of Groningen, Netherlands; Roel J. Bosker, Rijksuniversiteit Groningen, Dept of Education and GION, Netherlands</td>
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<td>Profiles of Teachers’ Conceptions of the Purposes of Assessment</td>
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<td>Helenrose Fives, Montclair State University, United States; Nicole Barnes, Montclair State University, United States</td>
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<td>Exploring reflective practice in mentor teacher and teacher trainee relationship</td>
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<td>Kinga Kaplar-Kodacsy, Eötvös Loránd University, Hungary; Helga Dorner, Central European University, Hungary</td>
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<td>Evaluating Professional Competencies of Science Teachers Pertinent to Elementary Particle Physics</td>
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<td>Michaela Oettle, University of Education, Freiburg, Germany</td>
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<td>Chair</td>
<td>Metacognitive control in a memory task in elementary school children</td>
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<td>Claudia Roebers, University of Bern, Switzerland; Natalie Guggisberg, University of Bern, Switzerland; Martina Steiner, University of Bern, Switzerland; Mariette van Loon, University of Bern, Switzerland</td>
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<tr>
<td></td>
<td>Investigating implicit theories of ability and its relationship to students self-regulated learning</td>
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<td>Yves Karlen, University of Zurich, Switzerland; Carmen Hirt, University of Zurich, Switzerland; Katharina Maag Merki, University of Zurich, Switzerland; Francesca Suter, University of Zurich, Switzerland</td>
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<td></td>
<td>Outcome Feedback and Reflection to Improve Calibration of High School Students: A Longitudinal Study</td>
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<td>Marloes Nederhand, Erasmus University Rotterdam, Netherlands; Huib Tabbers, Erasmus University Rotterdam, Netherlands; Remigius (Remy) Rikers, UCR / Utrecht University, Netherlands</td>
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<td>The effectiveness of journals in educational settings. A review study</td>
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<td>Sabine Fabriz, Goethe-Universität Frankfurt, Germany; Charlotte Dignath, Goethe-University Frankfurt, Germany; Franziska Perels, Saarland University, Germany</td>
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<td>Development of tools for identifying teacher metacognition</td>
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<td>Emine Erklin, Bogazici University, Turkey; Gursu Asik, Bahcesehir University, Turkey</td>
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<td>Socially Shared Regulated Learning with MetaTutor</td>
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<td>Jolique Kielstra, Radboud University Nijmegen, Netherlands; Inge Molenaar, Radboud University Nijmegen, Netherlands; Michelle Taub, North Carolina State University, United States; Roger Azevedo, North Carolina State University, United States</td>
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**POSTER PRESENTATION: PO: LEARNING AND PROFESSIONAL DEVELOPMENT**

| Chair | Instructional preferences and learning (transfer) in further education - a longitudinal study  
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<tbody>
<tr>
<td>Debora Valcan, Murdoch University, Australia</td>
<td>Michael Goller, University of Paderborn, Germany; Christoph Fischer, University of Paderborn, Germany; Christian Harteis, University of Paderborn, Germany</td>
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| | Innovative mathematics curriculum and its influences on teachers’ knowledge and beliefs  
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<tr>
<td>Laurinda Lomas, Australian Catholic University, Australia; Doug Clarke, Australian Catholic University, Australia</td>
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| | Knowledge restructuring through case-processing; a review of studies in three professional domains  
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<tr>
<td>Els Boshuizen, Open University of the Netherlands, Netherlands; Hans Gruber, University of Regensburg, Germany; Josef Strasser, University of Augsburg, Germany</td>
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| | Entrepreneurial failure: Is it possible to prevent it?  
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<tbody>
<tr>
<td>Fritz Oser, University of Fribourg, Switzerland; Susan Müller, University of St. Gallen, Switzerland; Lara Forsblom, University of Fribourg, Switzerland</td>
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| | Alumni Perspectives on Entrepreneurial Success in Vocational HE  
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<tr>
<td>Timo Nevalainen, Tampere University of Applied Sciences, Finland; Pia Hautamaki, Tampere University of Applied Sciences, Finland; Petri Nokelainen, Tampere University of Technology, Finland</td>
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| | Feedback of pupils as a starting point for teacher reflection – First results of an empirical study  
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<tr>
<td>Corinne Wyss, Zurich University of Teacher Education, Switzerland; Simone Biaggi, Zurich University of Teacher Education, Switzerland</td>
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### POSTER PRESENTATION: PO: LEARNING AND TEACHING IN CULTURALLY DIVERSE SETTINGS

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<th>Chair</th>
<th>Mathematics in Latin American Primary Education: diverse contexts, different results</th>
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<td>Beatriz Vargas Dorneles, Federal University of Rio Grande do Sul - UFRGS, Brazil; Luciana Corso, Federal University of Rio Grande do Sul - UFRGS, Brazil</td>
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<td></td>
<td>Exploring informal learning and integration of foreign nurses in Finnish workplaces</td>
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<td>Pauliina Alenius, University of Tampere, Finland; Päivi Vartiainen, University of Tampere, School of Education, Finland; Marja Koskela, University of Tampere, School of Education, Finland</td>
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<td></td>
<td>How to arouse the interest of all students in the intercultural EFL classroom</td>
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<td>Svenja Vielf, German Institute for International Educational Research (DIPF), Germany; Kerstin Göbel, University of Duisburg-Essen, Germany</td>
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<td>Opportunities and challenges for a STEM interdisciplinary agenda</td>
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<td>Russell Tytler, Deakin University, Australia; Vaughan Prain, Deakin University, Australia</td>
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<td>Between Two Worlds: Identity Construction Among Haredi University Students in Israel</td>
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<td>Naomi Perl, Mandel Leadership Institute, Israel</td>
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<td>Exploring learning of Mathematics among immigrant youths in Vestfold Norway</td>
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<td>Sikunder Ali, University College of Southeast Norway, Norway</td>
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</tbody>
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### POSTER PRESENTATION: PO: INSTRUCTIONAL DESIGN AND COLLABORATIVE LEARNING

<table>
<thead>
<tr>
<th>Chair</th>
<th>Students’ textbook strategy use: Effects of utilizing textbooks in mathematics class:</th>
<th>Mari Fukuda, University of Tokyo, Japan</th>
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<tr>
<td></td>
<td>Involving elementary and secondary school students in co-design: A systematic literature review</td>
<td>Andria Agesilaoou, Cyprus University of Technology, Cyprus; Eleni Kyza, Cyprus University of Technology, Cyprus</td>
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<td>Do dyads increase the chances of coherence formation with multiple representation material?</td>
<td>Christopher Williams, University of Ulm, Germany; Tina Seufert, University of Ulm, Germany</td>
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<td>Fostering Teachers’ Ability to Develop Learning Tasks and Establish Learning Tasks in their Lessons</td>
<td>Gregor Damnik, TU Dresden, Germany; Antje Proske, TU Dresden, Germany; Hermann Körndle, TU Dresden, Germany</td>
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<td></td>
<td>Game-based learning arrangements in financial education: A design-based research approach</td>
<td>Carmela Aprea, Friedrich Schiller University Jena, Germany; Julia Schultheis, Friedrich-Schiller-University Jena, Germany; Kathleen Stolle, Friedrich-Schiller-University Jena, Germany</td>
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<td>Qualifying Asynchronous Digital Dialogue for Collaborative Knowledge Building in Higher Education</td>
<td>Elsebeth Korsgaard Sorensen, Aalborg University, Denmark</td>
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</tbody>
</table>

**ANNOTATIONS:**
The presentation by Elsebeth Korsgaard Sorensen (Qualifying Asynchronous Digital Dialogue for Collaborative Knowledge Building in Higher Education) is cancelled.
| Chair | Predicting learners’ motivation from their typing behaviour in web based learning environments  
Markus Hörmann, Technical University of Munich (TUM), Germany; Maria Bannert, Technical University of Munich (TUM), Germany |
|-------|----------------------------------------------------------------------------------|
|       | The Relationships between Exploration and Learning Strategies in a Problem-Solving Environment  
Gyöngyvér Molnár, University of Szeged, Hungary; Eniko Bus, University of Szeged, Hungary; Erzsébet Korom, University of Szeged, Hungary; Benő Csapó, University of Szeged, Hungary |
|       | Electrodermal Activity Arousal throughout a Full Physics Course: A Clue for Learning Regulation?  
Héctor Javier Pijeira Díaz, University of Oulu, Finland; Paul A. Kirschner, Open University of the Netherlands, Netherlands; Sanna Järvelä, University of Oulu, Finland; Hendrik Drachsler, Open University of the Netherlands, Netherlands |
|       | Reading on Paper or on Tablet: An Eye-tracking Study  
Pablo Delgado Herrera, University of Valencia, Spain; Ladislao Salmeron, University of Valencia, Spain |
|       | Cue detection of emergency care clinicians during a simulation based critical incident  
Anneke van der Niet, Maastricht University, Netherlands; Ellen Kok, Utrecht University, Netherlands; Jeroen Van Merrienboer, Maastricht University, Netherlands; Anique de Bruin, Maastricht University, Netherlands |
|       | Online learning students in Russia: who are they?  
Polina Pekker, Lomonosov Moscow State University, Russian Federation; Lyudmila Popova, Lomonosov Moscow State University, Russian Federation |
**POSTER PRESENTATION: PO: TEACHING AND PRE-SERVICE TEACHER EDUCATION**

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<th>Chair</th>
<th>Estonian pre-service teachers’ evaluations on their knowledge areas according TPACK framework</th>
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<td>Piret Luik, University of Tartu, Estonia; Merle Taimalu, University of Tartu, Estonia</td>
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</table>

**Teachers’ Professional vision and its effect on their classroom management**

Saskia Brand-Gruwel, Open University of the Netherlands, Netherlands; Johan van Strien, Open University of the Netherlands, Netherlands; Sharisse van Driel, Open University, Netherlands; Charlotte Wolff, Open University, Netherlands; Halazka Maria Jarodzka, Open University of the Netherlands, Netherlands

**Study about School Career: Generation 2012-2016**

Edith Arévalo Vázquez, Escuela Normal Miguel F. Martínez, Mexico; Hilda Alicia Guzmán Elizondo, Secretaría de Educación Pública, Mexico; Nancy Bernardina Moya González, Secretaría de Educación Pública, Mexico; José Luis Domínguez Aguirre, Escuela de Graduados de la Escuela Normal Superior "Profr. Moisés Sáenz Garza", Mexico

**Inclusive teamteaching - A theoretical review**

Teija Koskela, University of Eastern Finland, Finland; Hanna-Maija Sinkkonen, University of Tampere, Finland

**Teachers’ subject-specific language awareness in technical vocational education**

Elly Wildeman, Fontys University of Applied Sciences, Netherlands; Maaike Koopman, Eindhoven University of Technology, Netherlands; Douwe Beijaard, Eindhoven University of Technology, Netherlands

**Introducing an Instrument for Measuring Academic Integration in Pre-Service Teachers**

Sandra Dietrich, University of Leipzig, Germany
### POSTER PRESENTATION: PO: MOTIVATION AND ACHIEVEMENT

<table>
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<tr>
<th>Chair</th>
<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td></td>
<td>The place for music education among school subjects in students’ views</td>
<td>Tünde Pintér, University of Szeged, Hungary; Csaba Csikos, University of Szeged, Hungary</td>
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<td></td>
<td>Goal theory and impostor phenomenon during surgery residency: Does self-doubt make me a fraud?</td>
<td>Michael Dempsey, Boston University, United States; Douglas Kauffman, Boston University, United States</td>
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<td></td>
<td>Implicit beliefs about giftedness and intelligence among Finnish high achieving students</td>
<td>Elna Kuusisto, University of Helsinki, Finland; Sonja Laine, University of Helsinki, Finland; Kirsi Timi, University of Helsinki, Finland</td>
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<td>Effects of a Gender Stereotyped Math TV Show on Girls’ and Boys’ Math Achievement and Attitudes</td>
<td>Eike Wille, University of Tübingen, Germany; Hanna Gaspard, University of Tübingen, Germany; Kerstin Oschatz, University of Tübingen, Germany; Benjamin Nagengast, Eberhard Karls Universität Tübingen, Germany; Ulrich Trautwein, University of Tübingen, Germany</td>
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<td>The nature of students’ pride and its interplay with motivation and learning</td>
<td>Kerstin Helker, RWTH Aachen University, Germany; Judith Fraenken, RWTH Aachen University, Germany; Marold Wosnitza, RWTH Aachen University, Germany</td>
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<td>Dual trajectory of academic motivation and perceived competence: a longitudinal study</td>
<td>Nadia Leroy, Université Grenoble Alpes, France</td>
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</table>

**ANNOTATIONS:**
The presentation by Michael Dempsey (Goal Theory and Impostor Phenomenon during Surgery Residency: Does Self-doubt Make Me a Fraud?) is cancelled.
### POSTER PRESENTATION: PO: NEUROSCIENCE AND MOTIVATION

<table>
<thead>
<tr>
<th>Chair</th>
<th>Analysis of Motivational and Cognitive Processes in Collaborative Learning</th>
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<tr>
<td>Rebecca Edwards, University of Victoria, Canada</td>
<td>Etsuko Tanaka, Nagoya University, Japan; Emmanuel Manalo, Kyoto University, Japan</td>
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</table>

**Examining Learners’ Physiological Activation during an Interaction with a Mobile AR App for Learning**

Susanne Lajcie, McGill University, Canada; Jason Harley, University of Alberta, Canada; Amanda Jarrell, McGill University, Canada; Tara Tressel, McGill University, Canada; Laura Pipe, McGill University, Canada; Chayse Haldane, The University of Alberta, Canada; Eric Poitras, University of Utah, United States

**The role of inhibitory control in learning counterintuitive science and math concepts in adolescence**

Annie Brookman-Byrne, Birkbeck, University of London, United Kingdom; Andy Tolmie, UCL Institute of Education, United Kingdom; Denis Mareschal, Birkbeck, University of London, United Kingdom; Iroise Dumontheil, Birkbeck, University of London, United Kingdom

**Associations between digits are fundamental for mathematical ability**

Bert Reynvoet, KU Leuven, Belgium; Helene Vos, KU LEUVEN, Belgium; Delphine Sasanguie, KU LEUVEN, Belgium; Tom Heyman, KU LEUVEN, Belgium; Wim Gevers, ULB Brussels, Belgium

**An EEG study of cognitive load during arithmetic calculation aided by brackets or visual spacing**

David Maximiliano Gomez Rojas, Universidad de Chile, Chile; Arturo Perez, Universidad de Chile, Chile; Alvaro Rivera-Rei, Universidad Diego Portales, Chile; Pablo Dartnell, Universidad de Chile, Chile

**The neuroscience of motor-expertise in real-world tasks**

Eilen Kok, Utrecht University, Netherlands; Anique de Bruin, Maastricht University, Netherlands
**POSTER PRESENTATION: PO: MORAL AND DEMOCRATIC EDUCATION**

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<tr>
<th>Chair</th>
<th>Integrating Impulses and Dilemma Stories for Values Education in STEM Context</th>
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<tr>
<td>Hanna Jarvenoja, University of Oulu, Finland</td>
<td>Heinz Mandl, Ludwig-Maximilians-Universität (LMU), Germany; Katrin Wallner, Ludwig-Maximilians-University Munich, Germany; Birgitta Kopp, Ludwig-Maximilians-University, Germany</td>
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<td>The importance of a transitional phase from limited to full installation of ICT in classrooms</td>
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<td>Taku Sugimoto, Aoyama Gakuin University, Japan</td>
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<td>Social development in school: A comparison of civic competences between 8th and 12th grade students.</td>
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<td>Dorien Sampermans, KU Leuven, Belgium; Ellen Claes, KU LEUVEN, Belgium</td>
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<td>Cathetorizing student, Cathetorizing texts. Will Plagiarism Detection leave Blood on the Tracks?</td>
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<td>Lars-Erik Nilsson, Kristianstad University, Sweden; Anders Eklov, Kristianstad University, Sweden; Tina Kullenberg, Kristianstad University, Sweden</td>
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<td>Policy formation in times of transition: What education policy research can tell us.</td>
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<td>Catherine Simon, Bath Spa University, United Kingdom</td>
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<td>The Economics of Ethics: The Logic of Moral Action and the Consequences for Education</td>
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<td>Karin Heinrichs, Otto-Friedrich-University Bamberg, Germany; Gerhard Minnameier, Goethe-Universität Frankfurt, Germany</td>
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**ANNOTATIONS:**

- The presentation by Catherine Simon (Policy formation in times of transition: What education policy research can tell us.) is cancelled.
- The presentation by Dorien Sampermans (Social development in school: A comparison of civic competences between 8th and 12th grade students.) is cancelled.
POSTER PRESENTATION: PO: ASSESSMENT

Chair
Martínez Ortiz Ma Guadalupe, Mexico

Tracing the student journey through the feedback landscape
Rola Ajawi, Deakin University, Australia; Margaret Bearman, Deakin University, Australia; Elizabeth Molloy, Monash University, Australia; Charlotte Rees, Monash University, Australia

Left to their own devices: using tablets to enhance student engagement in a flipped EFL classroom
Nicholas Bovee, Kyushu Sangyo University, Japan

Computer-based assessment of thinking skills in China: a pilot study
Hao Wu, University of Szeged, Hungary; Gyongyver Molnar, University of Szeged, Hungary

The interplay of g and mathematical abilities in large-scale assessments across grades
Nele Nicole Kampa, Leibniz Institute for Science and Mathematics Education (IPN), Germany; Steffani Sass, Leibniz Institute for Science Education and Mathematics, Germany

Deeper learning and Assessment in 7th graders reading comprehension processes
Wenke Mork Rogne, Volda University College, Norway; Siv M. Gamlem, Volda University College, Norway

Assessment for learning in Higher Education: Potential and constraints from the students’ view
Diana Pereira, University of Minho, Portugal; Patrícia Santos, Institute of Education - University of Minho, Portugal; Maria A. Flores, University of Minho, Portugal

ANNOTATIONS:
THE PRESENTATION BY ROLA AJAWI (TRACING THE STUDENT JOURNEY THROUGH THE FEEDBACK LANDSCAPE) IS CANCELLED AND REPLACED BY VICTORIA JOHANSSON (A COGNITIVE PERSPECTIVE OF HOW AUTHORS AND AUTHOR-TO-BE DESCRIBE THEIR WRITING PROCESSES).

THE PRESENTATION BY NICHOLAS BOVEE (LEFT TO THEIR OWN DEVICES: USING TABLETS TO ENHANCE STUDENT ENGAGEMENT IN A FLIPPED EFL CLASSROOM) IS CANCELLED.
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<th>Chair</th>
<th>Epistemic beliefs as predictors of epistemic emotions: Extending a theoretical model</th>
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<td>Tom Rosman, Leibniz Institute for Psychology Information, Germany; Anne-Kathrin Mayer, ZPID - Leibniz Institute for Psychology Information, Germany; Günter Krampen, ZPID - Leibniz Institute for Psychology Information, Germany</td>
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</table>

**Toward success or away from failure: Factors that predict regulatory focus and academic goal pursuit**

Fiona Cooligan, University of Ottawa, Canada; Kaitlyn Werner, Carleton University, Canada; Rebecca Klimo, Carleton University, Canada; Marina Milyavskaya, Carleton University, Canada

**Shifting attitudes on GMF’s: The influence of a conceptual change intervention**

Ian Thacker, University of Southern California, United States; Krista Muis, McGill University, Canada; Gale Sinatra, University of Southern California, United States; Robert Danielson, University of Southern California, United States; Reinhard Pekrun, Ludwig-Maximilians-Universität (LMU), Germany; Philip Winne, Simon Fraser University, Canada; Marianne Chevrier, McGill University, Canada

**How Perceived Emotions of Classmates Affect Students’ Emotions**

Philipp Forster, Ludwig-Maximilians-Universität (LMU), Germany; Kaiqi Shao, University of Munich (LMU), Germany; Reinhard Pekrun, Ludwig-Maximilians-Universität (LMU), Germany

**Viewpoints to tablet computers, learning and motivation –how are they related?**

Laura Hirsto, University of Eastern Finland, Finland; Timo Tossavainen, Univeristy of Eastern Finland, Finland

**Exploring teacher-student boundaries through ethical dilemmas in the secondary school context**

Zoe Morris, Monash University, Australia
### POSTER PRESENTATION: PO: EDUCATIONAL EFFECTIVENESS

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<th>Chair</th>
<th>The impact of project-based learning in a KAMISHIBAI class: developing students’ 21st-century skills</th>
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<tr>
<td>Andreas Obersteiner, University of Education Freiburg, Germany</td>
<td>Naomi Tomioka, Shikoku University, Junior College, Japan; Naohiro Minagawa, Naruto University of Education, Japan</td>
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<td>Gender differences on technology-enhanced feedback for pupils in general and special education</td>
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<td>Sanna Oinas, University of Helsinki, Finland; Risto Hotulainen, University of Helsinki, Finland;</td>
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<td>Mari-Paulina Vainikainen, University of Helsinki, Finland</td>
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<td>Implementation effects in the training of phonological awareness in kindergarten children</td>
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<td>Catharina Tilken, University of Würzburg, Germany; Sebastian Kempert, University of Potsdam,</td>
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<td>Germany; Regina Götz, University of Wuerzburg, Germany; Kristine Blatter, Deutsches Jugendinstitut,</td>
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<td>Germany; Wolfgang Schneider, University of Würzburg, Germany</td>
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<td>Transfer of knowledge: A modality, knowledge, and conceptual analysis</td>
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<td>Bobby Hoffman, University of Central Florida, United States; Morgan McAfee, University of Central</td>
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<td>Florida, United States</td>
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<td>When the apprentice surpasses the master: teacher content knowledge relative to their students</td>
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<td>Nives Nibali, University of Melbourne, Australia; Susan-Marie Harding, The University of Melbourne,</td>
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<td>Australia; Patrick Griffin, The University of Melbourne, Australia; Lorraine Graham, The University</td>
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<td>of Melbourne, Australia</td>
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<td>Assessing and improving quality science instruction using an innovative tablet portfolio app.</td>
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<td>Jose Felipe Martinez, University of California, Los Angeles, United States; Matthew Kloser,</td>
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<td>University of Notre Dame, France; Brian Stecher, The RAND Corporation, United States; Matt Wilsey,</td>
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<td>University of Notre Dame, United States; Jayashri Srinivasan, University of California, Los Angeles,</td>
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<td>United States; Amanda Edelman, Pardee RAND Graduate School, United States</td>
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<td>Implementation of instructional change and its effect on students’ achievement.</td>
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<td>Sébastien Dellisse, Université catholique de Louvain (UCL), Belgium; Benoît Galand, Université</td>
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<td>catholique de Louvain (UCL), Belgium; Xavier Dumay, Université catholique de Louvain (UCL),</td>
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<td>Belgium; Liesje Coertjens, Université catholique de Louvain (UCL), Belgium; Vincent Dupriez,</td>
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<td>Université catholique de Louvain (UCL), Belgium</td>
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<td>Effects of usability and organization on students' learning from</td>
<td>Álvaro Jáñez, University of Salamanca, Spain; Javier Rosales, University of Salamanca, Spain; Jean-François Rouet, University of Poitiers, France</td>
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<td>instructional hypertext</td>
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<td>Supportive hints in a digital environment foster students' motivation</td>
<td>Marlies ter Beek, University of Groningen, Netherlands; Leonie Brummer, University of Groningen, Netherlands; Anouk Donker-Bergstra, Rijksuniversiteit Groningen, Dept of Education and GION, Netherlands; Marie-Christine Opdenakker, University of Groningen, Netherlands</td>
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<td>to read informational text</td>
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<td>Effects of Scaffolding Programs on Meta-Cognitive Skills Within</td>
<td>Zvia Fund, Bar-Ilan University, Israel</td>
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<td>Computerized Science Problem Solving</td>
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<td>Learning from scientific texts through constructing video-based</td>
<td>Stephanie Wassenburg, Erasmus University Rotterdam, Netherlands; Björn de Koning, Erasmus University Rotterdam, Netherlands; Fred Paas, Erasmus University Rotterdam/University of Wollongong, Netherlands</td>
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<td>explanations</td>
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<td>The effect of computer game usage on absenteeism mediated by students'</td>
<td>Arvid Nagel, University of Teacher Education St.Gallen, Switzerland; Horst Biedermann, University of Teacher Education St.Gallen, Switzerland</td>
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<td>cognitive lesson avoidance</td>
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<td>How Tablets Can Improve Learning in Schools - An Explorative Study</td>
<td>Steffi Zander, Bauhaus-Universität Weimar, Germany; Anne Behrens, Bauhaus-Universität Weimar, Germany</td>
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</tbody>
</table>
POSTER PRESENTATION: PO: SPECIAL EDUCATIONAL NEEDS

Chair
Osnat Rubin, Israel

**Does a differentiated instruction increase or decrease interactions between students?**
Stefanie Bosse, University of Potsdam, Germany; Thorsten Henke, University of Potsdam, Germany; Katja Bogda, University of Potsdam, Germany; Nadine Spörer, University of Potsdam, Germany

**Effect of disability cognitive bias modification task on attitudes towards people with a disability**
Vanja Van Aarsen, KU Leuven, Belgium; Katja Petry, K.U.Leuven, Belgium

**Development and validation of a social network analysis instrument to promote inclusive education**
Jaamien Sannen, KU Leuven, Belgium; Katja Petry, KU Leuven (BE), Belgium; Nick Ferbyut, University of Antwerp, Belgium

**How to design educational material for inclusive classes**
Anna Noll, University of Koblenz-Landau, Germany; Jürgen Roth, University of Koblenz-Landau, Germany; Markus Scholz, Pädagogische Hochschule Ludwigshurg, Germany

**Italian preschool teacher's opinion about their inclusive practices**
Lucia Scipione, University of Modena and Reggio Emilia, Italy; Maja Antonietti, University of Modena and Reggio Emilia - Department of Education and Human Sciences, Italy; Chiara Bertolini, University of Modena and Reggio Emilia - Department of Education and Human Sciences, Italy; Alice Veneziani, University of Modena and Reggio Emilia - Department of Education and Human Sciences, Italy

**Teachers beliefs about inclusion: self-efficacy and attitudes**
Saskia Opalinski, University of Education Freiburg, Germany
### POSTER PRESENTATION: PO: SPECIAL EDUCATIONAL NEEDS AND PRIMARY EDUCATION

<table>
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<tr>
<th>Chair</th>
<th>Literacy Development Trajectories in Children at FR of Dyslexia: The Role of Early Oral Language</th>
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<tr>
<td>Natacha Boissicat, Université Grenoble Alpes, France</td>
<td>Marjolein Zee, University of Amsterdam, Netherlands; Sietske van Viersen, University of Amsterdam, Netherlands; Elise de Bree, University of Amsterdam, Netherlands; Aryan van der Leij, University of Amsterdam, Netherlands; Ben Maassen, University of Groningen, Netherlands; Peter de Jong, University of Amsterdam, Netherlands</td>
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</table>

**Specific and general orthographic knowledge predicts reading and spelling skills**

Telse Nagler, German Institute for International Educational Research (DIPF); IDeA-Research Center, Germany; Jelena Zarić, German Institute for International Educational Research (DIPF); IDeA-Research Center, Germany

**Improving executive functions in pupils with specific learning disabilities (dyslexia, dysgraphia)**

Mateja Hudoklin, University of Ljubljana, Slovenia; Cirila Peklaj, University of Ljubljana, Slovenia

**Development of an orthographic knowledge test to differentiate reading and spelling skill levels**

Jelena Zarić, German Institute for International Educational Research (DIPF); IDeA-Research Center, Germany

**Early Mathematical Skills of Children in South Africa and in Finland**

Riikka Mononen, University of Oslo, Norway; Johan Korhonen, Åbo Akademi University, Finland; Lara Raggot, University of Johannesburg, Unknown; Elizabeth Henning, University of Johannesburg, South Africa; Pirjo Aunio, University of Oslo / University of Helsinki, Finland

**What do MOOC providers think about accessibility?**

Francisco Iniesto, Open University, United Kingdom; Patrick McAndrew, Open University, United Kingdom; Shalley Minocha, Open University, United Kingdom; Tim Coughlan, Open University, United Kingdom
### POSTER PRESENTATION: PO: EARLY CHILDHOOD EDUCATION

<table>
<thead>
<tr>
<th>Chair</th>
<th>Learning patterns, personal factors and academic performance in students at Primary School</th>
<th>Jordi García-Oriols, Autonomous University of Barcelona, Spain; Jose Reinaldo Martinez-Fernandez, Autonomous University of Barcelona, Spain</th>
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<td></td>
<td>Oral Language and Early Literacy skills in Brazilian preschool children</td>
<td>Rute Tomás, University of Luxembourg, Luxembourg; Carolina Nikaedo, University of Luxembourg, Faculty of Language and Literature, Humanities, Arts and Educational Sciences (FLSHASE), Luxembourg; Elizeu Macedo, Universidade Presbiteriana Mackenzie, Brazil; Pascale Engel de Abreu, University of Luxembourg, Luxembourg</td>
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<td>Relationship between language and early numerical development in children at the age of kindergarten</td>
<td>Silvia Pixner, Institute of Psychology, UMIT, Health &amp; Life Sciences University, Austria</td>
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<tr>
<td></td>
<td>Children’s ideas about participation and their effect on sociocognitive development</td>
<td>Nadine Correia, University Institute of Lisbon (ISCTE - IUL), Portugal; Margarida Fialho, ISCTE-IU, Portugal; Cecília Aguiar, University Institute of Lisbon (ISCTE - IUL), Portugal</td>
</tr>
<tr>
<td></td>
<td>Exploring the relationship between learning patterns, academic talent and GPA in primary school</td>
<td>Laura García Ravidà, Autonomous University of Barcelona, Spain; Jose Reinaldo Martinez-Fernandez, Autonomous University of Barcelona, Spain; Juan Marín, Escola La Salut, Spain</td>
</tr>
<tr>
<td></td>
<td>The early home learning environment as a protective factor for early adolescent coping with life</td>
<td>Sabine Blaurock, University of Bamberg, Germany; Simone Lehrl, University of Bamberg, Germany</td>
</tr>
</tbody>
</table>
### POSTER PRESENTATION: PO: WRITING

| Chair | The recursive nature of the writing process: editing strategies of professional literary authors  
Susan Jones, University of Exeter, United Kingdom; Floor Buscheninke, Huygens ING, Netherlands  
Analysis of the strategy-focused instruction for improving writing competence  
Rut Sanchez, University of León, Spain; Paula Lopez, University of León, Spain; Alba Gonzalez, University of León, Spain; Raquel Fidalgo, University of León, Spain, Spain  
The SRSD + ICT model improves the writing skills of 4th grade students  
Catarina Araújo, Institute of Education - University of Minho, Portugal; Ana Paula Loução Martins, Institute of Education, University of Minho, Portugal; António José Osório, Institute of Education, University of Minho, Portugal  
Text quality, writing processess and students’ beliefs about writing at Secondary education in Chile  
Magdalena Flores, University of Amsterdam, Netherlands; Gert Rijlaarsdam, University of Amsterdam, Netherlands; Daphne van Weijen, University of Amsterdam, Netherlands  
Learning to be a good Reviewer: the effects of reviewing on one’s own writing  
Marta Pardo Estruch, Ramon Llull University, Spain; Montserrat Castelló, Ramon Llull University, Spain  
Delving into the subjective frequency estimates in Spanish. On what are the estimations based on?  
Mª Emma García Pérez, Pontificia University of Salamanca, Spain |

**ANNOTATIONS:**  
THE PRESENTATION BY MARTA PARDO ESTRUCH (LEARNING TO BE A GOOD REVIEWER: THE EFFECTS OF REVIEWING ON ONE’S OWN WRITING) IS CANCELLED.
**POSTER PRESENTATION: PO: MOTIVATION AND EDUCATIONAL PSYCHOLOGY**

| Chair | Does training to reflect on action foster reflection in action and finally on-the-job performance?  
|-------|-----------------------------------------------------------------  
|       | Elisa Motta, Swiss Federal Institute for Vocational Education and Training, Switzerland; Alberto Cattaneo, Swiss Federal Institute for Vocational Education and Training (SFIVET), Switzerland  
|       | Predicting teachers’ flow experience and job satisfaction from need satisfaction and frustration  
|       | YoonJung Cho, Sungshin Women’s University, Korea, Republic of; Sungok Serena Shim, Ball State University, United States  
|       | The Effects of Private Tutoring on the Learning Context at Home  
|       | Barbara Otto, Ludwigshburg University of Education, Germany; Christian Müller, Goethe-University Frankfurt, Germany  
|       | Group Processes in College Classrooms: A Control-Value Theory Framework  
|       | Jeannine Turner, Florida State University, United States; Jessica Summers, University of Arizona, United States  
|       | Measuring Science Attitudes: Two Studies Using a Motivation Framework  
|       | David Bergin, University of Missouri/Columbia, United States; Christi Bergin, University of Missouri/Columbia, United States; Chia-Lin Tsai, University of Missouri/Columbia, United States; Christopher Murakami, University of Missouri/Columbia, United States  
|       | Second grade students’ parents’ ability beliefs and the quality of their homework involvement  
|       | Grete Arro, Tallinn University, Estonia; Kati Aus, Institute of Psychology, Estonia  

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**Session C: 21**

Time: 08:30-10:00

Location: Main Building A - A31
### POSTER PRESENTATION: PO: HIGHER EDUCATION AND TEACHING APPROACHES

<table>
<thead>
<tr>
<th>Chair</th>
<th>Defining Consistency in Higher Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frans Prins, Utrecht University, Netherlands</td>
<td>Julian Döme, University of Potsdam, Germany; Thi Nguyen, University of Potsdam, Germany; Ulrike Lucke, University of Potsdam, Germany</td>
</tr>
</tbody>
</table>

#### I like to make people laugh: Adult playfulness among educators
Pirkko Sirkiä, University of Lapland, Finland; Marjaana Kangas, University of Lapland, Finland; Justus Randolph, Mercer University, United States; Hell Riukamo, University of Lapland, Finland

#### Does motivation explain different achievement of preservice teachers and psychology students?
Eva Seifried, Heidelberg University, Germany; Birgit Spinath, Heidelberg University, Germany

#### Using a person-centered approach in identifying regulation profiles among Finnish medical students
Henna Vilppu, University of Turku, Finland; Eero Laakkonen, University of Turku, Finland; Mirjamäki Mikkila-Erdmann, University of Turku, Finland; Pekka Kääpä, University of Turku, Finland

#### Students’ experience of interactive teaching by means of a digital response system
Åge Diseth, University of Bergen, Norway

#### Relationship between conceptions of learning, teamwork conceptions and GPA among undergraduates
Laia Encinar Prat, Autonomous University of Barcelona, Spain; Marc Martinez-Pons, UAB Universitat Autònoma de Barcelona, Spain; Jose Reinaldo Martinez-Fernandez, Autonomous University of Barcelona, Spain

**ANNOTATIONS:**
**IMPORTANT NOTICE:** THIS SESSION WILL TAKE PLACE IN ROOM PINNI B - B3111.
**POSTER PRESENTATION: PO: COMPUTER-ASSISTED LEARNING**

<table>
<thead>
<tr>
<th>Chair</th>
<th>Different visual patterns for game-based learners with high and low self-efficacy of game playing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rupert Higham, University of Cambridge, United Kingdom</td>
<td>Meng-Jung Tsai, National Taiwan University of Science &amp; Technology, Taiwan; Chung-Yuan Hsu, National Pingtung University of Science and Technology, Taiwan; Guo-Li Chiou, National Taiwan University of Science and Technology, Taiwan; Ching-Yeh Wang, National Taiwan University of Science and Technology, Taiwan; An-Hsuan Wu, National Taiwan University of Science and Technology, Taiwan</td>
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<td><strong>Effects of a Training Intervention on Knowledge Integration in Physics</strong></td>
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<td>Markus H. Hefter, Bielefeld University, Germany; Kirsten Berthold, University of Bielefeld, Germany</td>
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<td><strong>A comparative study on learning and teaching online inquiry skills in Finland and Chile</strong></td>
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<td>Eero Sormunen, University of Tampere, Finland; Mirjamaja Mikkila-Erdmann, University of Turku, Finland; Teemu Mikkonen, University of Tampere, Finland; Norbert Erdmann, University of Turku, Finland; Carita Kili, University of Oslo, Norway; Elina Hämäläinen, University of Jyväskylä, Finland; Mario Quintanilla, Universidad Católica de Chile, Chile; Roberto González-Ibáñez, Universidad de Santiago, Chile; Paavo Leppänen, University of Jyväskylä, Finland; Marja Vauaras, University of Turku, Finland</td>
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<tr>
<td></td>
<td><strong>Learning science - does e-text design matter?</strong></td>
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<td>Norbert Erdmann, University of Turku, Finland; Mirjamaja Mikkila-Erdmann, University of Turku, Finland; Eero Laakkonen, University of Turku, Finland</td>
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<td><strong>Students’ task solving times and task solving efficiency on an online language skills test</strong></td>
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<td>Tibor Vидákovich, University of Szeged, Hungary; Olga S. Hrebi, University of Szeged, Hungary; Tibor Vigh, University of Szeged, Hungary</td>
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<td><strong>Development of early mathematical cognition using app. An empirical study</strong></td>
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<td>Jose I. Navarro-Guzman, University of Cadiz, Spain; Gonzalo Ruiz Cagigas, Universidad de Cádiz, Spain; Manuel Aguilar-Villagráñ, University of Cadiz, Spain; Estíbaliz Aragón-Mendoza, University of Cadiz, Spain; M. Carmen Canto, University of Cadiz, Spain; Candida Delgado-Casas, University of Cadiz, Spain; Esperanza Marchena-Consejero, University of Cadiz, Spain; Inmaculada Menacho, University of Cadiz, Spain; Manuel García-Sedeño, University of Cadiz, Spain; Pedro Ramiro, University of Cadiz, Spain</td>
</tr>
</tbody>
</table>

**ANNOTATIONS:**

THE PRESENTATION BY JOSE I. NAVARRO-GUZMAN (DEVELOPMENT OF EARLY MATHEMATICAL COGNITION USING APP. AN EMPIRICAL STUDY) IS CANCELLED.
### Session C: 24
**Time:** 08:30-10:00  
**Location:** Main Building C - C5

#### POSTER PRESENTATION: PO: HIGHER EDUCATION AND STUDENT LEARNING

**Chair**  
Daniela Martinek, University of Salzburg, Austria

**Merging academic and LMS data for first year engineering and education students at two universities**  
Carlos González-Ugalde, Pontificia Universidad Católica de Chile, Chile; Sergio Celis, Escuela de Ingeniería y Ciencias. FCFM. Universidad de Chile, Chile; Dany López, Facultad de Educación. Pontificia Universidad Católica de Chile, Chile; Sergio Barrera, Escuela de Ingeniería y Ciencias. FCFM. Universidad de Chile, Chile; Augusto Sandoval, Facultad de Ingeniería. Pontificia Universidad Católica de Chile, Chile; Maximiliano Montenegro, Facultad de Educación. Pontificia Universidad Católica de Chile, Chile; Carolina Guzmán-Valenzuela, University of Chile, Chile

**Students’ expectations to and experiences of research based teaching**  
Camilla Østerberg Rump, University of Copenhagen, Denmark; Dorte Christiansen Elmeskov, Department of Science Education, University of Copenhagen, Denmark

**Where is the future? Identifying trends in educational technology using big data methodology**  
Maren Luebecke, Zurich University of Applied Sciences, Switzerland; Wilfried Seifert, Softwareentwicklung Seifert, Switzerland

**How can Question Generation be implemented in the University Curriculum?**  
Roman Abel, University of Kassel, Germany; Matthias Mai, University of Goettingen, Germany

**Encountering Students in Disabling Conditions in Higher Education**  
Lotta Anderson, Malmö University, Sweden; Lisbeth Ohlsson, Malmö University, Sweden; Camilla Nordgren, Malmö University, Sweden

**Assessment Preferences and Approaches to Learning of MBA and MPA students: A Comparative Study**  
James Kwan, Lancaster University, Singapore

### Session D: 1
**Time:** 10:15-11:45  
**Location:** Pinni B - B3109

#### ROUNDTABLE: RT: ONLINE LEARNING AND WRITING

**Chair**  
Jannet Doppenberg, Eindhoven University of Technology, Netherlands

**To tweet or not to tweet?! Can using Twitter improve learning and instruction in higher education?**  
Bret Adams, Ghent University, Belgium; Annelies Raes, Ghent University, Belgium; Hannelore Montreux, Ghent University, Belgium; Elise Ameloot, Ghent University, Belgium; Tammy Schellens, Ghent University, Belgium

**Improving integration skills for argumentative writing: a pilot intervention in an online university**  
Maria Luna, Universidad a Distancia de Madrid (UDIMA), Spain; Ruth Villalon, University of Cantabria, Spain; Mar Mateos, Universidad Autónoma de Madrid, Spain; Elena Martín, Universidad Autónoma de Madrid, Spain
### SINGLE PAPER: DOCTORAL EDUCATION

**Chair**
Thomas Moser, University College of Southeast Norway, Norway

**Addressing the quality of doctoral supervisors**
Margaret Kiley, Australian National University, Australia

**What is the value of a doctoral degree? Perceptions of doctoral value in the UK knowledge economy**
Billy Bryan, University of Sheffield, United Kingdom; Kay Guccione, University of Sheffield, United Kingdom

**Doctoral Students’ Writing Regulation Processes**
Anna Sala-Buban, Ramon Llull University, Spain; Montserrat Castelló, Ramon Llull University, Spain; Gert Rijlaardsdam, University of Amsterdam, Netherlands

### SINGLE PAPER: HIGHER EDUCATION - B

**Chair**
Steve Nebel, Chemnitz University of Technology, Germany

**Students’ identity formation processes and academic achievement at their university**
Hanke Korpershoek, University of Groningen, Netherlands

**Mapping pedagogic frailty in science education: a comparison of academics’ espoused values**
Paulo Correia, University of Sao Paulo, Brazil; Joana Aguiar, University of Sao Paulo, Brazil; Ian Kinchin, University of Surrey, United Kingdom

**Study profiles in different disciplines and their relation to study success and self-efficacy**
Anna Parpala, University of Helsinki, Finland; Telle Hallikari, University of Helsinki, Finland

**Improving University Courses by Fostering Students’ Learning Strategies**
Alexander Renkl, University of Freiburg, Germany; Tino Endres, University of Freiburg, Germany; Jasmin Leber, University of Freiburg, Germany
SINGLE PAPER: SELF-REGULATION AND MOTIVATION

**Chair**
Norbert Erdmann, University of Turku, Finland

**Perception of Mindfulness Practice and its Contribution to Students Wellbeing**
Ariela Teichman-Weinberg, Achva Academic College, Israel; Ilana Rachmilewitz, Achva Academic College, Israel; Esther Grogbeld, Achva Academic College, Israel

**Enhancing adolescents’ self-determined motivation and self-concept in math. An intervention study.**
Claudia Cristina Brandenberger, University of Bern, Switzerland; Gerda Hagenaier, University of Bern, Switzerland; Tina Hascher, University of Bern, Switzerland

**Parents’ autonomous motivation favours students’ motivation toward homework**
Angelica Moë, University of Padova, Italy; Idit Katz, Ben-Gurion University of the Negev, Israel; Marianna Alesi, Università di Palermo, Italy

**Predictors of self-regulated learning in upper secondary and higher education**
Christian Brandmo, University of Oslo, Norway; Olav Schewe, University of Oslo, Norway

ROUNDTABLE: RT: ASSESSMENT AND CONCEPTUAL CHANGE

**Chair**
Laurent Filliettaz, University of Geneva, Switzerland

**Reflective Assessment in Computer-Supported Collaborative Learning for Pre-Service Teachers**
Carol Chan, The University of Hong Kong, Hong Kong; Wincy Lee, Education University of Hong Kong, Hong Kong; Rhoda Wang, The University of Hong Kong, Hong Kong

**Influencing policy makers and institutional leaders in Finnish Arts Education via systems thinking**
Tuulikki Laes, Sibelius Academy of the University of the Arts Helsinki, Finland; Lauri Väkevää, Sibelius Academy of the University of Arts Helsinki, Finland; Hanna Kamensky, Sibelius Academy of the University of Arts Helsinki, Finland; Sanna Kivijärvi, Sibelius Academy of the University of Arts Helsinki, Finland; Kati Nieminen, Sibelius Academy of the University of Arts Helsinki, Finland

ANNOTATIONS:
THIS SESSION IS CHAIRED BY JULIA KOSINAR, REPLACING LAURENT FILLIETTAZ. LAURENT FILLIETTAZ WILL CHAIR SESSION P: 7
SINGLE PAPER: ASSESSMENT AND EVALUATION

Chair
Tsafir Goldberg, University of Haifa, Israel

The modelling of teachers' judgment in summative assessment practices
Lucie Mottler Lopez, University of Geneva, Switzerland; Lionel Dechamboux, University of Geneva, Switzerland

Development of achievement and test taking behavior – a class-centered analysis
Risto Hotulainen, University of Helsinki, Finland; Sirku Kupiainen, University of Helsinki, Finland; Mari-Pauliina Vainikainen, University of Helsinki, Finland; Pirjo Lindfors, University of Tampere, Finland

Relationship between scientific and inductive reasoning in grades 5 and 7
Erzsébet Korom, University of Szeged, Hungary; Mária B. Németh, MTA-SZTE Research Group on the Development of Competencies, Hungary; Attila Pásztor, MTA-SZTE Research Group on the Development of Competencies, Hungary; Benő Csapó, University of Szeged, Hungary

Online assessment of scientific reasoning and motivation to learn science: a pilot study in Namibia
Linus Kambeyo, University of Szeged, Hungary; Attila Pásztor, MTA-SZTE Research Group on the Development of Competencies, Hungary; Erzsébet Korom, University of Szeged, Hungary; Mária B. Németh, MTA-SZTE Research Group on the Development of Competencies, Hungary; Benő Csapó, University of Szeged, Hungary

SINGLE PAPER: TEACHING AND TEACHER EDUCATION - J

Chair
Kristina Kögler, Germany

Linking Instruction and Student Achievement to Reading in English as a Second Language
Lisbeth M Brevik, University of Oslo, Norway

Effects and Surprises of Teaching Biology in a Foreign Language
Pablo Pirnay-Dummer, Brandenburg Medical School Theodor-Fontane, Germany; Bonny Jäncke, Martin-Luther-Universität Halle-Wittenberg, Germany

Motivational orientations, psychological needs and perceived autonomy support in teacher training
Daniela Martinek, University of Salzburg, Austria; Matteo Carmignola, University of Salzburg, Austria; Ulrike Kipman, Pädagogische Hochschule Salzburg, Austria; Julia Maria Keller, University of Salzburg, Austria

Prompting Preservice Teachers' Professional Vision for Self-Regulated Learning
Tova Michalsky, Bar-Ilan University, Israel

ANNOTATIONS: THIS SESSION IS CHAIRED BY ANITA WELCH, REPLACING KRISTINA KÖGLER.
### Session D: 8 | Time: 10:15-11:45 | Location: Virta - 113

#### SINGLE PAPER: PHENOMENOGRAPHY AND VARIATION THEORY

<table>
<thead>
<tr>
<th>Chair</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tal Palevsy, University of Haifa, Israel</td>
<td>No Parents Left Behind! Enabling parental learning on a mobile phone app for working class families</td>
<td>Luis Go, The University of Hong Kong, Hong Kong; Ming Fai Pang, The University of Hong Kong, Hong Kong</td>
</tr>
<tr>
<td></td>
<td>Learning to see numbers as parts and wholes in preschool</td>
<td>Angelika Kullberg, University of Gothenburg, Sweden; Anna-Lena Ekdahl, Jönköping University, Sweden; Maria Reis, Göteborgs Universitet, Sweden</td>
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<td>Learner contributions and sensitive teacher ears – Learning opportunities in mathematics instruction</td>
<td>Tuula Maunula, University of Gothenburg, Sweden</td>
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<td>Critical competencies in teacher students’ learning to teach</td>
<td>Kyriaki Doumas, Linnaeus University, Sweden</td>
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</tbody>
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### Session D: 9 | Time: 10:15-11:45 | Location: Pinni A - A1081

#### SINGLE PAPER: LEARNING AND PROFESSIONAL DEVELOPMENT - B

<table>
<thead>
<tr>
<th>Chair</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maaike Eendedijk, University of Twente, Netherlands</td>
<td>Leadership for Innovative Teacher Teams in Higher Education</td>
<td>Mieke Koeslag-Kreunen, Zuyd University of Applied Sciences / Maastricht University, Netherlands; Piet Van den Bossche, Maastricht University School of Business and Economics, University of Antwerp, Belgium; Marcel Van der Klink, Zuyd University of Applied Sciences, Netherlands; Wim Gijselaers, Maastricht University, Netherlands</td>
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<td>Understanding crowdworkers’ learning practices</td>
<td>Anoush Margaryan, Goethe-Universität Frankfurt, Germany</td>
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<td>An Investigation Into Predictors and Mediators of Transfer of Training: A Time-Lagged Study Design</td>
<td>Natalie Govaerts, KU Leuven - University of Leuven, Belgium; Eva Kyndt, KU Leuven, Belgium; Filip Dochy, KU Leuven - University of Leuven, Belgium</td>
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<td>Effects of online information provided by banks on learning and financial decision making</td>
<td>Baarbel Fuerstenau, TU Dresden, Germany; Mandy Hommel, TU Dresden, Germany; Claudia Leopold, Université de Fribourg, Switzerland; Hector Ponce, Universidad de Santiago de Chile; Chile; Mario Lopez, Universidad de Santiago de Chile, Chile</td>
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### Session D: 10  
**Time:** 10:15-11:45  
**Location:** Main Building E - E350

**SINGLE PAPER: SPECIAL EDUCATIONAL NEEDS - D**

**Chair**  
Doris Holzberger, Germany

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
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</thead>
<tbody>
<tr>
<td>The influence of cognitive strategies on solving concrete-operational concepts</td>
<td>Moritz Börnert-Ringleb, University of Potsdam, Germany; Jürgen Wilbert, Universität Potsdam, Germany</td>
</tr>
<tr>
<td>The Authority to Choose Seclusion in Inclusion - An ASD Perspective on Educational Settings</td>
<td>Mona Holmqvist, Malmö University, Sweden; Lotta Andersson, Malmö University, Sweden</td>
</tr>
<tr>
<td>Social skills and social network dynamics: A longitudinal study in inclusive classrooms</td>
<td>Ariana Garrote, University of Zurich, Switzerland; Elisabeth Moser Opitz, University of Zurich, Switzerland</td>
</tr>
<tr>
<td>Reciprocal Relationships between Attitudes and Performance in Students with LD in Mathematics</td>
<td>Linda Salihu, University of Pristina, Kosovo; Mikko Aro, University of Jyväskylä, Finland; Pekka Räsänen, Niilo Mäki Institute, Finland</td>
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</tbody>
</table>

**ANNOTATIONS:**  
THE PRESENTATION BY LINDA SALIHU (RECIPROCAL RELATIONSHIPS BETWEEN ATTITUDES AND PERFORMANCE IN STUDENTS WITH LD IN MATHEMATICS) IS CANCELLED.

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### Session D: 11  
**Time:** 10:15-11:45  
**Location:** Pinni B - B4115

**SINGLE PAPER: METACOGNITION - D**

**Chair**  
Markus Talvio, University of Helsinki, Finland

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td>Assessing children’s cognitive and emotional self-regulation in two naturalistic play settings</td>
<td>Pauline Slot, Utrecht University, Netherlands; Hanna Mulder, Utrecht University, Netherlands; Paul Leseman, Utrecht University, Netherlands</td>
</tr>
<tr>
<td>Implicit theories and self-regulation in kindergarten: Development of a self-report instrument</td>
<td>Miriam Compagnoni, University of Zurich, Switzerland; Yves Karlen, University of Zurich, Switzerland</td>
</tr>
<tr>
<td>Parent training to promote self-regulation in full- and preterm born toddlers</td>
<td>Kim Gärtner, Heidelberg University, Germany; Verena Clara Vetter, Heidelberg University Hospital, Centre for Child and Adolescent Medicine, Germany; Gitta Reuner, Heidelberg University Hospital, Centre for Child and Adolescent Medicine, Germany; Silke Hertel, Ruprecht-Karls-Universität Heidelberg, Germany</td>
</tr>
<tr>
<td>Building stories together: How can a playful pedagogy support self-regulation in primary schools?</td>
<td>David Whitebread, University of Cambridge, United Kingdom; Marisol Basilio, University of Cambridge, United Kingdom</td>
</tr>
</tbody>
</table>
## SINGLE PAPER: EDUCATIONAL EFFECTIVENESS - B

### Chair
Stefan Keller, School of Teacher Education Basel, Switzerland

**Combining Generic and Content-Specific Practices in Exploring Teaching Quality in Physical Education**
Charalambos Charalambous, University of Cyprus, Cyprus; Leonidas Kyriakides, University of Cyprus, Cyprus; Ermis Kyriakides, University of Cyprus, Cyprus; Niki Tsangaridou, University of Cyprus, Cyprus

**Characteristics of Parental Mediation of a History Museum's Curriculum**
Billie Elam, University of Haifa, Israel; Merav Yosfan, University of Haifa, Faculty of Education, Israel

**New Ways of Dealing with Lacking Measurement Invariance in Educational Research**
Markus Sauerwein, German Institute for International Educational Research (DIPF), Germany; Desiree Theis, German Institute for International Educational Research (DIPF), Germany

**Effects of Teaching and Learning Beliefs on Achievement – A Comparison of China and Germany**
Anna-Katharina Praetorius, German Institute for International Educational Research (DIPF), Germany; Susanne Kugler, The German Institute for International Educational Research (DIPF), Germany; Yi Qi, Educational Testing Service, United States; Eckhard Klieme, German Institute for International Educational Research (DIPF), Germany

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## SINGLE PAPER: TEACHING AND TEACHER EDUCATION - L

### Chair
Lisbeth Ohlsson, Malmö University, Sweden

**Effects of inquiry learning on learning outcomes in adolescents’ geography education**
Merja Kuksma, University of Tampere, Finland

**Designing a training format supporting student teachers’ parent-teacher communication competences**
Karen De Coninck, Ghent University, Belgium; Ruben Vanderlinde, Ghent University, Belgium

**Teachers’ analysis of mathematics classrooms – How can different indicators complement each other?**
Sebastian Kuntze, Ludwigsburg University of Education, Germany; Marita Friesen, Ludwigsburg University of Education, Germany

**Teacher self-efficacy: a study on validity and reliability of an Italian version of the “Ohio scale”**
Lucia Scipione, University of Modena and Reggio Emilia, Italy; Maja Antonietti, University of Modena and Reggio Emilia - Department of Education and Human Sciences, Italy; Roberta Cardarelli, Università Modena e Reggio Emilia, Italy; Chiara Bertolini, University of Modena and Reggio Emilia - Department of Education and Human Sciences, Italy; Andrea Pinzur, University of Modena and Reggio Emilia - Department of Education and Human Sciences, Italy
### Session D: 14  
**Time:** 10:15-11:45  
**Location:** Main Building A - A2A

**SINGLE PAPER: COMPREHENSION OF TEXT AND GRAPHICS - G**

<table>
<thead>
<tr>
<th>Chair</th>
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<th>Authors</th>
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<tbody>
<tr>
<td>Valentin Riemer, University of Ulm, Germany</td>
<td><strong>Cueing in Animations Leads to a Trade-Off between Knowledge of Terms and Transfer</strong></td>
<td>Christoph Mengelkamp, University of Würzburg, Germany; Kerstin E. J. Kasper, Pixelgenau Consulting GmbH, Germany</td>
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<td><strong>Twice is good! Test-Taking Fosters Repeated but not Initial Study of Multimedia Materials</strong></td>
<td>Alexander Eitel, University of Freiburg, Germany; Katharina Scheiter, Leibniz-Institut für Wissensmedien (IWM), Germany</td>
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<td><strong>Information visualizations for a general audience: the designers’ perspective</strong></td>
<td>Annemarie Quispel, Avans University of Applied Sciences / Tilburg University, Netherlands; Alfons Maes, Faculty of Humanities Tilburg University, Netherlands; Joost Schilperoord, Tilburg University, Faculty of Humanities, Netherlands</td>
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<tr>
<td></td>
<td><strong>When (no) more help is needed: Using eye movements to individually support multimedia learning</strong></td>
<td>Marie-Christin Krebs, Leibniz-Institut für Wissensmedien, Germany; Thérèse Felicitas Eder, Leibniz-Institut für Wissensmedien, Germany; Anne Schueler, Leibniz-Institut für Wissensmedien, Germany; Katharina Scheiter, Leibniz-Institut für Wissensmedien, Germany</td>
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### Session D: 15  
**Time:** 10:15-11:45  
**Location:** Main Building D - D14

**SINGLE PAPER: EYE-TRACKING**

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<tr>
<th>Chair</th>
<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td>Marie Evens, KU LEUVEN, Belgium</td>
<td><strong>Role of sender/peer feedback characteristics for performance and cognitive processing (eye tracking)</strong></td>
<td>Markus Berndt, Universitätsklinikum der Ludwig-Maximilians-Universität München, Germany; Jan-Willem Strijbos, University of Groningen, Netherlands; Frank Fischer, Ludwig-Maximilians-Universität (LMU), Germany</td>
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<td><strong>Attraction or distraction? Eye-tracking comparisons of TD versus ASD learner gaze at visual displays</strong></td>
<td>Mary Hanley, Durham University, United Kingdom; Deborah Riby, Durham University, United Kingdom</td>
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<td><strong>Using mobile eye-tracking to analyse learning behaviour in class: Two case-study examples</strong></td>
<td>Markku Hannula, University of Helsinki, Finland; Enrique Garcia Moreno-Esteva, University of Helsinki, Finland; Mika Toivanen, Finnish Institute of Occupational Health, Finland</td>
</tr>
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<td></td>
<td><strong>Using real-world gaze proportions to investigate expert teacher priorities: An eye-tracking study</strong></td>
<td>Nora McIntyre, University of Sheffield, United Kingdom; Halszka Maria Jarodzka, Open University of the Netherlands, Netherlands; Robert Klassen, University of York, United Kingdom</td>
</tr>
</tbody>
</table>
### Session D: 16  
**Time:** 10:15-11:45  
**Location:** Pinni B - B1097

#### SINGLE PAPER: WRITING - C

**Chair**  
Johan Korhonen, Åbo Akademi University, Finland

**Writing development in a linguistic and rhetoric perspective**  
Victoria Johansson, Lund University, Sweden; Pia Gustafsson, Lund University, Sweden; Åsa Wengelin, University of Gothenburg, Sweden

**Effects of dyslexia on undergraduate students’ writing processes and product**  
David Galbraith, University of Southampton, United Kingdom; Veerle Baaijden, Center for Language and Cognition Groningen, Netherlands

**Teachers as writers: the pedagogical impact of teachers’ writing identities and personal practices**  
Lucy Oliver, University of Exeter, United Kingdom

**Effective writing interventions via revision instruction: The role of explicit process strategies**  
Paula Lopez, University of León, Spain; Raquel Fidalgo, University of León, Spain, Spain; Gert Rijlaarsdam, University of Amsterdam, Netherlands; Mark Torrance, Staffordshire University, United Kingdom; Alba Gonzalez Moreira, University of León, Spain, Spain

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**ANNOTATIONS:**  
*The presentation by David Galbraith (Effects of Dyslexia on Undergraduate Students' Writing Processes and Product) is cancelled.*

### Session D: 17  
**Time:** 10:15-11:45  
**Location:** Main Building D - D11

#### SINGLE PAPER: MOTIVATION AND GOAL ORIENTATION

**Chair**  
Antti Laherto, University of Helsinki, Finland

**Broadening classroom goal structures nomological network using doubly latent multilevel modeling**  
Lisa Bardach, University of Vienna, Austria; Marko Lüftenegger, University of Vienna, Austria; Gholam Hassan Khajav, Department of Language Education, University of Bojnord, Iran; Seyyedeh Mina Hamed, English Department, Ferdowsi University of Mashhad, Iran

**The development of achievement goal orientations during the first school years**  
Katarina Nuutila, University of Helsinki, Finland; Heta Tuominen-Soini, University of Helsinki, Finland; Markku Niemivirta, University of Oslo, Norway

**Teaching Quality and Stress: Antecedents or Outcomes of University Instructors’ Achievement Goals?**  
Martin Daumiller, University of Augsburg, Germany; Markus Dresel, University of Augsburg, Germany

**Boredom, wellness, and coping: An examination of relations among American teachers**  
Hadley Solomon, University of New Hampshire, United States; Beth Fornauf, University of New Hampshire, United States; Joy Dangora Erickson, University of New Hampshire, United States; Myles Lynch, University of New Hampshire, United States; Vasiliki Partinoudi, University of New Hampshire, United States; Minori Haga Stefan, University of New Hampshire, United States
### Session D: 18  
**Time:** 10:15-11:45  
**Location:** Pinni B - B1100  

**ROUNDTABLE: RT: MOTIVATION AND EMOTION**

**Chair**  
Jan van Driel, The University of Melbourne, Australia

**Examining Survey and Interview Measures of Individual Interest**  
Amanda Durik, Northern Illinois University, United States; Sarah Coley, Northern Illinois University, United States; Steven McGee, The Learning Partnership, United States

**A Conceptual Model of Internal and External Factors that Support Interest Development within Domains**  
Tamara Jetton, Central Michigan University, United States; Jonna Kulikowich, Penn State, United States

**Measuring teachers’ and students’ empathy**  
Csaba Gáspár, University of Szeged, Hungary

**ANNOTATIONS:**  
THE PRESENTATION BY TAMARA JETTON (A CONCEPTUAL MODEL OF INTERNAL AND EXTERNAL FACTORS THAT SUPPORT INTEREST DEVELOPMENT WITHIN DOMAINS) IS CANCELLED.  
THE PRESENTATION BY CSABA GÁSPÁR (MEASURING TEACHERS’ AND STUDENTS’ EMPATHY) IS CANCELLED.  
THE PRESENTATION BY AMANDA DURIK (EXAMINING SURVEY AND INTERVIEW MEASURES OF INDIVIDUAL INTEREST) IS MOVED TO SESSION D:1.

**SESSION D:18 IS CANCELLED.**

### Session D: 19  
**Time:** 10:15-11:45  
**Location:** Main Building D - D10B

**SINGLE PAPER: TEACHING AND TEACHER EDUCATION - P**

**Chair**  
Marie-Christine Opdenakker, University of Groningen, Netherlands

**Videotaped lessons as means to enhance reflection and knowledge of secondary mathematics teachers**  
Ronnie Karsenty, Weizmann Institute of Science, Israel

**Working with learner errors in classrooms: the Data Informed Practice Improvement Project**  
Karin Brodie, Wits University, South Africa; Nicholas Molefe, Wits University, South Africa; Abel Uverhiavwe, Wits University, South Africa

**The PRACTISE professional development program: using classroom video to foster scientific discourse**  
Hilda Borko, Stanford University, United States; Jonathan Osborne, Stanford University, United States; Florencio Gomez Zaccarelli, Stanford University, United States; Evan Fishman, Stanford University, United States; Emily Reigh, Stanford University, United States; Anita Tseng, Stanford University, United States

**Pushing teachers to rethink and change their practice on goal clarity in video-based discussions**  
Alexander Groeschner, Friedrich Schiller University Jena, Germany; Martina Jerabek, Technische Universität München (TUM), Germany; Tina Seidel, Technische Universität München (TUM), Germany

**ANNOTATIONS:**  
THE PRESENTATION BY ALEXANDER GROESCHNER (PUSHING TEACHERS TO RETHINK AND CHANGE THEIR PRACTICE ON GOAL CLARITY IN VIDEO-BASED DISCUSSIONS) IS CANCELLED AND REPLACED BY FREDRIK MORK RIXENES (A REVIEW ON ICT-TRAINING IN SCANDINAVIAN TEACHER EDUCATION).
### SINGLE PAPER: HIGHER EDUCATION, MOTIVATION AND SELF-EFFICACY

**Chair**
Kaethe Schneider, Friedrich Schiller University Jena, Germany

**Cognitive and non-cognitive predictors of early academic achievement in higher education**
Jonas Willems, University of Antwerp, Belgium; Liesje Coertjens, Université catholique de Louvain (UCL), Belgium; Vincent Donche, University of Antwerp, Belgium

**Effect of undergraduate research on motivation and self-efficacy beliefs about research**
Floris van Blankenstein, Leiden University, Netherlands; Nadira Saab, Leiden University, Netherlands; Roeland M. Van der Rijst, ICLO- Leiden University Graduate School of Teaching, Netherlands; Paul Van den Broek, Leiden University, Netherlands

**Graduates’ evaluations of the usefulness of their university education in early career situation**
Tarja Tuononen, University of Helsinki, Finland; Anna Parpala, University of Helsinki, Finland; Sari Lindblom, University of Helsinki, Finland

**Biology students’ learning outcomes, self-efficacy beliefs and study success in PBL course**
Heidi Hytinen, University of Helsinki, Finland; Viivi Virtanen, University of Helsinki, Finland; Heikki Hirvonen, University of Helsinki, Finland; Sari Lindblom, University of Helsinki, Finland

### SINGLE PAPER: EDUCATIONAL TECHNOLOGY

**Chair**
Katerina Vickova, Masaryk University, Czech Republic

**How students use smart phones and tablets in learning science and mathematics?**
Margus Pedaste, University of Tartu, Estonia; Olev Must, University of Tartu, Estonia; Äli Leijen, University of Tartu, Estonia; Mario Mäeots, University of Tartu, Estonia; Leo Aleksander Siiman, University of Tartu, Estonia; Külli Kori, University of Tartu, Estonia; Liina Adov, University of Tartu, Estonia

**Creating technology-based learning scenarios to support observation skills in VET schools**
Valentina Caruso, Swiss Federal Institute for Vocational Education and Training, Switzerland; Alberto Cattaneo, Swiss Federal Institute for Vocational Education and Training SFIVET, Switzerland; Jean-Luc Gurtner, University of Fribourg, Switzerland

**Interactivity is not sufficient for imagination-based integration of external representations**
Prajakt Pande, Homi Bhabha Centre for Science Education, Tata Institute of Fundamental Research, India; Aditi Kohiyal, Indian Institute Of Technology Bombay, India; Rwitajit Majumdar, Indian Institute of Technology Bombay, Mumbai, India; Harshit Agrawal, Homi Bhabha Centre for Science Education, Tata Institute of Fundamental Research, Mumbai, India; Sanjay Chandrasekharan, Homi Bhabha Centre for Science Education, Tata Institute of Fundamental Research, Mumbai, India

**Blended analytics: A first step in capturing and visualizing physical and digital learning processes**
Sarah Howard, University of Wollongong, Australia; Kate Thompson, Griffith University, Australia; Jie Yang, University of Wollongong, Australia; Jun Ma, University of Wollongong, Australia; Abelardo Pardo, University of Sydney, Australia
**SYMPOSIUM: ANALYSING VIDEO RECORDED SOCIAL INTERACTIONS: THE CASE OF STUDENTS WITH SPECIAL EDUCATIONAL NEEDS**

**Chair**
Sabine Zorn, INS HEA, France

**Discussant**
Baruch Schwarz, Hebrew University of Jerusalem, Israel

**Students with profound intellectual and multiple disabilities: Spontaneous behaviors in classroom**
Esther Atlan, INS HEA, France; Danièle Toubert, INSHEA, France; Minna Puustinen, INS HEA, France

**Help interactions between adolescents with an autism spectrum disorder and their teachers**
Sabine Zorn, INS HEA, France; Minna Puustinen, INS HEA, France

**Metacognitive strategies and self-regulated learning in students with disadvantaged backgrounds**
Sophie Brandon, University of Geneva, Switzerland; Chloé Barthassat, University of Geneva, Switzerland; Hildallil Rojas, Université de Genève, Unknown; Christine Hessels-Schlatter, University of Geneva, Switzerland

**Intervention aimed at improving reading comprehension in adults with intellectual disability**
Sophie Brandon, University of Geneva, Switzerland; Marco Hessels, University of Geneva, Switzerland

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**SYMPOSIUM: WHAT DO (PRE-SERVICE) TEACHERS THINK, BELIEVE AND FEEL REGARDING HETEROGENEOUS CLASSROOMS**

**Chair**
Charlotte Dignath, Goethe-University Frankfurt, Germany

**Organiser**
Mareike Kunter, Goethe-Universität Frankfurt, Germany

**Discussant**
Helenrose Fives, Montclair State University, United States

**Teachers’ beliefs regarding heterogeneous classrooms – a systematic literature review**
Charlotte Dignath, Goethe-University Frankfurt, Germany; Mareike Kunter, Goethe-Universität Frankfurt, Germany

**Teacher students’ attitudes towards diversity: Conceptualizing and testing a multidimensional model**
Sabine K. Lehmann-Grube, University of Augsburg, Germany; Andreas Hartinger, University of Augsburg, Germany; Robert Grassinger, University of Augsburg, Germany; Hans Peter Brandl-Bredenbeck, University of Augsburg, Germany; Ulrike Ohl, University of Augsburg, Germany; Manfred Rieger, University of Augsburg, Germany; Markus Dresel, University of Augsburg, Germany

**Stereotypes and attitudes towards students with special educational needs and inclusive education**
Ineke Pit-ten Cate, University of Luxembourg, Luxembourg; Mireille Krischler, University of Luxembourg, Luxembourg; Sabine Krolak-Schwerdt, University of Luxembourg, Luxembourg

**Australian Pre, Primary and Secondary School Pre-Service Teacher Attitudes to Inclusive Education**
Christopher Boyle, University of Exeter, United Kingdom
### Session D: 24  
**Time:** 10:15-11:45  
**Location:** Main Building A - A3  

**SYMPOSIUM: BECOMING A TEACHER - AUSTRIAN, ESTONIAN AND FINNISH TEACHER STUDENTS’ PERCEPTIONS**

**Chair**  
Eeva Kaisa Hyry-Beihammer, University of Education Upper Austria, Austria

**Discussant**  
Erika Löfström, University of Helsinki, Finland

Austrian student teachers’ beliefs about (good) teaching and learning as a part of their PPTs  
Eeva Kaisa Hyry-Beihammer, University of Education Upper Austria, Austria; Petra Hecht, Pädagogische Hochschule Vorarlberg, Austria; Jan Boehm, University of Education Upper Austria, Germany

**Becoming a teacher in Estonia: perceptions of roles, beliefs and tensions in different programmes**  
Tiina Anspal, University of Tartu, Estonia; Äli Leijen, University of Tartu, Estonia

**Finnish teacher students’ beliefs: Case of University of Helsinki**  
Katriina Maaranen, University of Helsinki, Finland; Katarina Stenberg, University of Helsinki, Finland; Liisa Karlsson, University of Eastern Finland, Finland; Harri Pitkanien, University of Eastern Finland, Finland

**Becoming a teacher - Austrian, Estonian and Finnish teacher students’ perceptions**  
Tiina Anspal, University of Tartu, Estonia; Eeva Kaisa Hyry-Beihammer, University of Education Upper Austria, Austria; Katriina Maaranen, University of Helsinki, Finland; Katarina Stenberg, University of Helsinki, Finland; Jan Boehm, University of Education Upper Austria, Germany; Petra Hecht, Pädagogische Hochschule Vorarlberg, Austria

### Session D: 25  
**Time:** 10:15-11:45  
**Location:** Virta - 120  

**INVITED SYMPOSIUM: COMMUNITY LED EDUCATIONAL REFORM: CO-DEFINING FUTURES, OUT OF SCHOOL LEARNING & POVERTY PROOFING**

**Chair**  
Liz Todd, Newcastle University, United Kingdom

**Organiser**  
John O’Neill, Massey University, Nicaragua

**Discussant**  
Rocio Garcia-Carrion, University of Deusto, Spain

**Out of school hours activities: looking at school staff, parent and pupil meanings and theories**  
Karen Laing, Newcastle University, United Kingdom; Liz Todd, Newcastle University, United Kingdom

**Forms and Understandings of Engagement in a Co-operative School Setting**  
Deborah Ralls, University of Manchester, United Kingdom

**Reform from the Bottom-Up. A grass-roots, assets-based approach improving young people’s outcomes**  
Claire Forbes, University of Manchester, United Kingdom

**Poverty proofing the school day: bottom-up reform a potential for real change**  
Liz Todd, Newcastle University, United Kingdom
INVITED SYMPOSIUM: PEER RELATIONS WITHIN SCHOOLS: ASSOCIATIONS WITH STUDENTS’ MOTIVATION AND ACADEMIC ACHIEVEMENT

**Chairs**
Maria Tulis, University of Augsburg, Austria; Marion Reindl, University of Augsburg, Germany

**Discussant**
Jari-Erik Nurmi, University of Jyväskylä, Finland

**Associations between friends, academic emotions and achievement**
Marion Reindl, University of Augsburg, Germany; Maria Tulis, University of Augsburg, Austria; Markus Dresel, University of Augsburg, Germany

**Peer Selection and Influence in Children’s Reading Skills: A Social Network Approach**
Noona Kiuru, University of Jyväskylä, Finland; Dawn DeLay, Arizona State University, United States; Brett Laursen, Florida Atlantic University, United States; William Burk, Radboud University Nijmegen, Netherlands; Marja-Kristiina Lerkkanen, University of Jyväskylä, Finland; Anna-Maja Poikkeus, University of Jyväskylä, Finland; Jari-Erik Nurmi, University of Jyväskylä, Finland

**The Contribution of “Bonding” and “Bridging” Peer Relations to Students’ Academic Achievement**
Kara Makara, University of Glasgow, United Kingdom; Stuart Karabenick, University of Michigan, United States; Alanna Epstein, University of Michigan, United States

**Judging students’ peer-networks in class: A new facet of teacher diagnostic competence?**
Marvin Harks, Freie Universität Berlin, Germany; Lysann Zander, Freie Universität Berlin, Germany; Bettina Hannover, Freie Universität Berlin, Germany

INVITED SYMPOSIUM: UP-TO-DATE APPROACHES FOR PRACTICE RELATED OPPORTUNITIES TO LEARN IN TEACHER EDUCATION

**Chair**
Inger Marie Dalehette, University of Agder, Norway

**Organisers**
Annelies Kreis, Zurich University of Teacher Education, Switzerland; Tina Seidel, Technische Universität München (TUM), Germany

**Discussant**
Paulien Meijer, Radboud University Nijmegen, Netherlands

**Peer-to-Peer-Mentoring in communities of practice: A partnership of preservice and mentor teachers**
Urban Fraefel, University of Applied Sciences Northwestern Switzerland, Switzerland; Nils Bernhardsson-Laros, University of Applied Sciences Northwestern Switzerland, School of Teacher Education, Switzerland; Kerstin Baeuerlein, University of Applied Sciences Northwestern Switzerland, Switzerland; Sebastian Jünger, University of Applied Sciences and Arts Northwestern Switzerland, Switzerland

**What’s Going on in a Teacher’s Mind? How Teachers Processes Difficult Classroom Scenarios**
Lisa Kim, University of York, United Kingdom; Robert Klassen, University of York, United Kingdom

**Teachers’ Gaze Recording: An Opportunity to Improve Teachers’ Instructional Support Strategies?**
Antje von Suchodoletz, New York University Abu Dhabi, United Arab Emirates; Irene Skuballa, New York University Abu Dhabi, United Arab Emirates

**Characteristics of Spontaneous Co-Planning vs Content-Focused Peer Coaching Between Student Teachers**
Annelies Kreis, Zurich University of Teacher Education, Switzerland; Stefanie Schnebel, University of Tübingen, Germany
INVITED SYMPOSIUM: NAVIGATING THE INTERPERSONAL EDDIES OF PEER ASSESSMENT

**Chair**
Jan-Willem Strijbos, University of Groningen, Netherlands

**Organisers**
Jan-Willem Strijbos, University of Groningen, Netherlands; Ernesto Panadero, Universidad Autónoma de Madrid, Spain

**Discussant**
Marieke van der Schaaf, Utrecht University, Netherlands

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**Reviewing the interpersonal variables that play a role in peer assessment**
Ernesto Panadero, Universidad Autónoma de Madrid, Spain

**Anonymity as instructional scaffold in peer assessment: Effects on peer feedback quality**
Tijs Rotsaert, Ghent University, Belgium; Ernesto Panadero, Universidad Autónoma de Madrid, Spain; Tammy Schellens, Ghent University, Belgium

**Inferring individual scores from group scores via peer assessment: Part 1 – Methodological review**
Jan-Willem Strijbos, University of Groningen, Netherlands; Dominique Sluijsmans, Zuyd University of Applied Sciences, Netherlands; Karsten Stegmann, Ludwig-Maximilians-Universität (LMU), Germany

**Inferring individual scores from group scores via peer assessment: Part 2 – A simulation study**
Jan-Willem Strijbos, University of Groningen, Netherlands; Karsten Stegmann, Ludwig-Maximilians-Universität (LMU), Germany; Dominique Sluijsmans, Zuyd University of Applied Sciences, Netherlands
Assessment quality: an integrative literature review
Desirée Joosten-ten Brinke, Open University of the Netherlands, Netherlands; Karin Gerritsen-van Leeuwenkamp, Open University of the Netherlands, Netherlands; Liesbeth Kester, Utrecht University, Netherlands

Formative use of test results: A user’s perspective
Dorien Hopster-den Otter, University of Twente, Netherlands; Saskia Wools, Cito, Netherlands; Theo Eggen, Universiteit Twente, Netherlands; Bernard Veldkamp, University of Twente, Netherlands

The effect of feedback on learning: a case study on the intended and the perceived curriculum
Jorik G. Arts, Fontys University of Applied Sciences, Netherlands; Mieke Jaspers, Fontys University of applied sciences, Netherlands; Lianne Poel, Fontys University of Applied Sciences, Netherlands; Desirée Joosten-ten Brinke, Open University of the Netherlands, Netherlands

Assessing learning gains
Jekaterina Rogaten, Open University, United Kingdom; Denise Whitelock, Open University, United Kingdom; Bart Rienties, Open University, United Kingdom
### SINGLE PAPER: SOCIAL INTERACTION IN LEARNING AND INSTRUCTION - H

**Chair**  
Ida Kukliansky, Ruppin Academic Center, Israel

<table>
<thead>
<tr>
<th>Title</th>
<th>Speakers</th>
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<tbody>
<tr>
<td>Shaping participation in vocational training interactions: the case of schismsing</td>
<td>Laurent Filliettaz, University of Geneva, Switzerland; Vassiliki Markaki, University of Grenoble, France</td>
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<td>Production and Perception of Classroom Disturbances</td>
<td>Boris Eckstein, University of Zurich, Switzerland; Urs W. Grob, University of Zurich, Switzerland; Kurt Reusser, University of Zurich, Switzerland</td>
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<tr>
<td>The effectiveness of multiple GILB-MIXP STEM learning environments on students’ performance.</td>
<td>Marion Crauwels, KU Leuven, Belgium; Arnt Van Soom, KU LEUVEN, Belgium; Carla Schramme, KU LEUVEN, Belgium; Daan Moechars, KU LEUVEN, Belgium</td>
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SYMPOSIUM: ANALYSING PRODUCTIVE CLASSROOM AND PROFESSIONAL DIALOGUES ACROSS CONTEXTS USING DIFFERENT TOOLS

**Chair**
Sara Hennessy, University of Cambridge, United Kingdom

**Discussant**
Alina Reznitskaya, Montclair State University, United States

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The development of a coding scheme to analyse collaborative group argumentation
Antonia Larrain, Universidad Alberto Hurtado, Chile; Paulina Freire, Universidad Alberto Hurtado, Chile; Patricia López, Universidad Alberto Hurtado, Chile; Valeska Grau, Pontificia Universidad Católica de Chile, Chile

Coding productive dialogue in whole-class primary school settings in the UK
Maria Vrikki, University of Cambridge, United Kingdom; Christine Howe, University of Cambridge, United Kingdom; Sara Hennessy, University of Cambridge, United Kingdom; Neil Mercer, University of Cambridge, United Kingdom; Lisa Wheatley, University of Cambridge, United Kingdom

Productive teacher discourse in school-based team meetings: toward a systematic coding system
Miriam Babichenko, Hebrew University of Jerusalem, Israel; Christa Asterhan, Hebrew University of Jerusalem, Israel; Mirit Israeli, Ben-Gurion University of the Negev, Israel; Adam Lefstein, Ben-Gurion University of the Negev, Israel

Coding feedback in an online- and video-based learning environment during a field experience
Susi Kläß, Friedrich Schiller University of Jena, Germany; Marc Kleinknecht, Leuphana University of Luneburg, Germany; Alexander Groeschner, Friedrich Schiller University of Jena, Germany
WEDNESDAY, 30 AUGUST 2017

Session E: 1  Time: 12:00-13:30  Location: Linna – K109

POSTER PRESENTATION: PO: PROFESSIONAL DEVELOPMENT AND PHENOMENOGRAPHY

Chair
Sabine Fabriz, Goethe-Universität Frankfurt, Germany

Cooperative learning new software for the workplace – following work functions or work processes?
Mandy Hommel, TU Dresden, Germany

The role of mentoring in early career physics teachers’ professional identity construction
David Cameron, The Institute of Physics, United Kingdom; Anna Grant, AlphaPlus Consultancy Ltd, United Kingdom

Developing a scalable lecturer professional development framework
Thomas Cochrane, Auckland University of Technology, New Zealand; Vickel Narayan, Auckland University of Technology, New Zealand

A structural approach to the first ten natural numbers
Anna-Lena Ekdahl, Jönköping University, Sweden; Camilla Björklund, University of Gothenburg, Sweden

Qualitative differences in learning as a function of qualitative differences in teaching
Ming Fai Pang, The University of Hong Kong, Hong Kong; Ference Marton, Göteborg University, Sweden

Light and Shadow in primary school - Towards elementary optics and understanding radiation
Mona Holmqvist, Malmö University, Sweden; Lydia Murmann, University of Bremen, Germany

ANNOTATIONS:

THE PRESENTATION BY MING FAI PANG (QUALITATIVE DIFFERENCES IN LEARNING AS A FUNCTION OF QUALITATIVE DIFFERENCES IN TEACHING) IS CANCELLED AND REPLACED BY ANDREA BERNHOLT (STUDENTS’ EPISTEMIC BELIEFS IN SWEDEN AND GERMANY: CORRELATIONS WITH CLASSROOM CHARACTERISTICS).
**POSTER PRESENTATION: PO: EDUCATIONAL THEORY**

<table>
<thead>
<tr>
<th>Chair</th>
<th><strong>Classroom interaction in student presentations and follow-up discussions in a university EFL course</strong></th>
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<tr>
<td>Mikko Vesisenaho, UoJ</td>
<td>Frantisek Tuma, Masaryk University, Czech Republic</td>
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<td><strong>Learning about religion the in formal education of a Finnish Reception Centre for asylum seekers</strong></td>
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<td>Tapani Inmanen, University of Helsinki, Finland</td>
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<td><strong>Promoting Students' STEM Literacy Skills Through a PBL Online Simulation</strong></td>
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<td>Scott W Brown, University of Connecticut, United States; Kimberly Lawless, University of Illinois</td>
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<td>at Chicago, United States; Christopher Rhoads, UConn, United States</td>
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<td><strong>Education into dialogue: Blogging across cultural and religious difference</strong></td>
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<td>Rupert Wegerif, University of Exeter, United Kingdom</td>
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<td><strong>Paving the road to sustainable educational change</strong></td>
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<td>Mireille Hubers, University of Twente, Netherlands</td>
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<td><strong>Making scientific modeling tangible for problem solving – Assessment of the procedural dimension</strong></td>
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<td>Susanne Digel, University of Koblenz-Landau, Germany; Alexander Kauertz, University of Koblenz-Landau, Germany; Patrick Löffler, University of Koblenz-Landau, Germany; Jochen Scheid, University of Koblenz-Landau, Germany</td>
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**ANNOTATIONS:**

THE PRESENTATION BY MIREILLE HUBERS (PAVING THE ROAD TO SUSTAINABLE EDUCATIONAL CHANGE) IS MOVED TO SESSION I: 1.
### POSTER PRESENTATION: PO: COMPREHENSION OF TEXT AND GRAPHICS

| Chair | Investigating the integration of multimedia information by means of eye tracking  
Anne Schueler, Leibniz-Institut für Wissensmedien, Germany |
|-------|---------------------------------------------------------------------------------|
|       | **Efficiency to process finger configurations predicts initial math performance**  
Josetxu Orrantia, University of Salamanca, Spain; Rosario Sánchez, University of Salamanca, Spain; Laura Matilla, University of Salamanca, Spain; Javier Rosales, University of Salamanca, Spain; David Munez, National Institute of Education / Nanyang Technological University, Singapore; Lieven Verschaffel, KU Leuven, Belgium |
|       | **Detecting errors in program flow diagrams: Comparing novices and advanced programmers**  
Markus Nivala, University of Gothenburg, Sweden; Florian Hauser, Ostbayerische Technische Hochschule (OTH) Regensburg, Germany; Helen Jossberger, University of Regensburg, Germany; Markus Reiss, Ostbayerische Technische Hochschule (OTH) Regensburg, Germany; Juergen Mottok, Ostbayerische Technische Hochschule (OTH) Regensburg, Germany; Hans Gruber, University of Regensburg, Germany |
|       | **The Effects of Reading Goals on the Comprehension of Argumentative Text and Belief Change**  
Irene-Anna Diakidoy, University of Cyprus, Cyprus; Melina Ioannou, University of Cyprus, Cyprus; Stelios Christodoulou, University of Cyprus, Cyprus |
|       | **Learning by teaching. Improving teacher students’ reading strategy skills**  
Nadine Spörer, University of Potsdam, Germany; Helvi Koch, Universität Potsdam, Germany; Jennifer Lambrecht, University of Potsdam, Germany; Thorsten Henke, University of Potsdam, Germany |
|       | **Prerequisite Knowledge and Time of Testing in Learning with Animations and Static Pictures**  
Tim Kühl, University of Mannheim, Germany; Sabrina Navratil, University of Mannheim, Germany; Stefan Münzer, Universität Mannheim, Germany |

**ANNOTATIONS:**  
**IMPORTANT NOTICE: THIS SESSION WILL TAKE PLACE IN ROOM MAIN BUILDING D - D14.**
## ROUNDTABLE: RT: EDUCATIONAL EVALUATION AND EARLY CHILDHOOD EDUCATION

**Chair**  
Carmen Zurbriggen, University of Fribourg, Switzerland

**Teacher-child interactions with monolingual and multilingual kindergarteners**  
Annegien Langeloo, University of Groningen, Netherlands; Mayra Mascareño, University of Groningen, Netherlands; Marjolein Deunk, University of Groningen, Netherlands; Maaikel van Rooijen, University of Groningen / GION, Netherlands; Jan-Willem Strijbos, University of Groningen, Netherlands

**Agreement Between Students’ and Principals’ Ratings of Teacher’s Use of Motivational Strategies**  
Christi Bergin, University of Missouri/Columbia, United States; David Bergin, University of Missouri/Columbia, United States; Eli Jones, University of Missouri/Columbia, United States

**The Principal Effect: Detecting Principal Error in Classroom Observations**  
Christi Bergin, University of Missouri/Columbia, United States; Eli Jones, University of Missouri/Columbia, United States

## POSTER PRESENTATION: PO: MOTIVATION AND SELF-EFFICACY

**Chair**  
Jyrki Reunamo, University of Helsinki, Finland

**Exploring Engagement Growth in Japanese Elementary Schools**  
Quint Oga-Baldwin, Waseda University, Japan; Luke Fryer, University of Hong Kong, Hong Kong

**Teachers’ self-efficacy, goal orientations, and classroom behaviours – An interaction analysis**  
Sindu George, Monash University, Australia

**Academic optimism as a lived experience.**  
Claire Lloyd, Liverpool Hope University, United Kingdom; Sue Cronin, Liverpool Hope University, United Kingdom

**Self-Concept Mediates the Relation between Achievement and Emotions in Mathematics**  
Joanneke van der Beek, Utrecht University, Netherlands; Sanne van der Ven, Utrecht University, Netherlands; Paul Leseman, Utrecht University, Netherlands; Evelyn Kroesbergen, Utrecht University, Netherlands

**Arabic Language Learners’ Self-Efficacy and its Sources**  
Laura Page, University of Kentucky, United States; John Eric Lingal, University of Kentucky, United States; Hadeel Ali, University of Denver, United States; Ellen Usher, University of Kentucky, United States; Parth Patel, University of Kentucky, United States; Tiffany Thomas, University of Kentucky, United States

**Socio-demographic and academic predictors of educational aspirations of elementary school students**  
Iris Marušić, Institute for Social Research, Croatia; Josip Šabić, Institute for Social Research, Croatia

**ANOTATIONS:**  
THE PRESENTATION BY SINDU GEORGE (TEACHERS’ SELF-EFFICACY, GOAL ORIENTATIONS, AND CLASSROOM BEHAVIOURS – AN INTERACTION ANALYSIS) IS CANCELLED.
### ROUNDTABLE: RT: TEACHER EDUCATION AND METHODS IN LEARNING

**Chair**  
Antoine Lecat, Université catholique de Louvain (UCL), Belgium

**Engaging in Lesson Study: How it Impacts Teachers’ Learning and Professional Agency?**  
Miheala Mitescu Manea, The National University of Arts “George Enescu” Iasi, Romania

**Exploring configurations of personal and situational factors in teachers’ identity development**  
Gonny Schellings, Eindhoven University of Technology, Netherlands; Janine Mommers, Eindhoven University of Technology, Netherlands; Maaike Koopman, Eindhoven University of Technology, Netherlands; Douwe Beijaard, Eindhoven University of Technology, Netherlands

**Shifting positions when engaging in practice through Design-Based Research**  
Roland Hachmann, University of Southern Denmark, Denmark; Lea Tilde Rosenlund, University of Southern Denmark, Denmark; Jens Jørgen Hansen, University of Southern Denmark, Denmark

---

### POSTER PRESENTATION: PO: HIGHER AND DOCTORAL EDUCATION

**Chair**  
Hanke Korpershoek, University of Groningen, Netherlands

**First-year students approach interdisciplinarity in Nanoscience course**  
Anna-Leena Kähkönen, University of Jyväskylä, Finland

**Empirical Investigation of Challenges for PBL Stakeholders in Engineering Education**  
Daniel Rees Lewis, Northwestern University, United States; Spencer Carlson, Northwestern University, United States; Matthew Easterday, Northwestern University, United States; Elizabeth Gerber, Northwestern University, United States

**Disciplinary Practices and Multiple Literacies: How Can they Meet in the Middle?**  
Joshua Radinsky, University of Illinois at Chicago, United States; Iris Tabak, Ben-Gurion University of the Negev, Israel; Uzi Brami, Ben-Gurion University of the Negev, Israel

**Which facets of interest do influence the study success at the study entry phase in mathematics?**  
Stefanie Rach, University of Paderborn, Germany; Stefan Ufer, Ludwig-Maximilians-Universität (LMU), Germany; Timo Kosiol, Ludwig-Maximilians-Universität (LMU), Germany

**Picturing roles: Activation of PhD candidates’ role identities as researchers and teachers**  
Alessia Hillbrink, University of Münster, Germany; Regina Jucks, WWU Münster, Germany

**Assessment task using concept map with errors to support accurate feedback for the students**  
Paulo Correia, University of Sao Paulo, Brazil; Gisele Cabral, University of Sao Paulo, Brazil
### POSTER PRESENTATION: PO: SOCIAL INTERACTION

| Chair | Participatory roles in small groups working in a virtual collaborative science learning environment  
Olli-Pekka Heinimäki, University of Turku, Finland; Anne-Elina Salo, University of Turku, Finland; Marja Vauras, University of Turku, Finland  
The effect of cooperative learning on group work skills of pupils in Dutch primary education  
Marij Veldman, University of Groningen, Netherlands; Roel J. Bosker, Rijksuniversiteit Groningen, Dept of Education and GION, Netherlands; Tom Snijders, University of Groningen, dep. of sociology, Netherlands; Simone Doolaard, University of Groningen, Netherlands  
Using Twitter data to understand participation in a science outreach campaign  
Adam Maltese, Indiana University, United States  
Indigenous Participation in Arts Education: A framework for increasing learning outcomes  
Robert Barton, Griffith University, Australia  
School social work in Switzerland. Characteristics and factors of interprofessional collaboration  
Monique Brunner, University of Bern, Switzerland; Ueli Hostettler, PHBern – University of Teacher Education, Switzerland; Simone Ambord, University of Bern, Switzerland; Roger Pfiffner, Bern University of Applied Sciences, Switzerland  
Teacher-Student Relationships From Kindergarten to Sixth Grade and Students' School Adjustment  
Rianne Bosman, University of Amsterdam, Netherlands; Debora Roorda, University of Amsterdam, Netherlands; Ineke van der veen, Kohnstamm Institute, University of Amsterdam, Netherlands; Helma Koomen, University of Amsterdam, Netherlands |

**ANNOTATIONS:**

THIS SESSION IS CHAIRMED BY LAURENT FILLIETTAZ. TOBIAS ROLFES WILL CHAIR SESSION E: 17.

### ROUNDTABLE: RT: LIFELONG LEARNING AND RESEARCHER CAREERS

| Chair | Acquisition of hard-to-learn knowledge in the domain of geriatric care nursing  
Bianca Steffen, University of Paderborn, Germany; Michael Goller, University of Paderborn, Germany; Christian Harteis, University of Paderborn, Germany  
Different Effects of Department Prestige on Post-PhD Job Placement  
Jakob Tesch, DZHW - German Centre for Research on Higher Education and Science Studies, Germany  
Lifelong learning policies and their implications for young adults at risk in Germany  
Alina Florentina Boutiuc-Kaiser, University of Education Freiburg, Germany |

**ANNOTATIONS:**

THIS SESSION WILL BE CHAIRMED BY MICHAEL GOLLER, REPLACING KATHARINA THIES.
**Session E: 10**

**Time:** 12:00-13:30  
**Location:** Main Building E - E222

### ROUNDTABLE: RT: TEACHER EDUCATION AND PROFESSIONAL DEVELOPMENT

**Chair**  
Lucie Mottier Lopez, University of Geneva, Switzerland

**Supporting sustainable professional development in teachers implementing STEM education**  
Mireille Hubers, University of Twente, Netherlands; Maaike Endediijk, University of Twente, Netherlands

**Fostering teacher trainees’ assessment skills with real-life learning tasks**  
Christian Klein, University of Freiburg, Germany; Stephanie Herppich, University of Freiburg, Germany; Matthias Nückles, University of Freiburg, Germany; Joerg Wittwer, University of Freiburg, Germany

**Mindsets About Inclusion. A Comparison Between Concept Maps of German and Finnish Student Teachers**  
Franziska Greiner, Friedrich Schiller University of Jena, Germany; Baerbel Kracke, University of Jena, Germany

**ANNOTATIONS:**  
THIS SESSION WILL BE CHAIRMED BY CARMELA APREA, REPLACING LUCIE MOTTIER LOPEZ.

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**Session E: 11**

**Time:** 12:00-13:30  
**Location:** Main Building E - E221

### ICT DEMONSTRATION: BRITE: AN ONLINE RESOURCE TO DEVELOP CAPACITY FOR PROFESSIONAL RESILIENCE

**Chair**  
Gerry Geitz, Netherlands

**BRITE: An online resource to develop capacity for professional resilience**  
Susan Beltman, Curtin University, Australia; Caroline Mansfield, Murdoch University, Australia; Ralph Delzepich, RWTH Aachen University, Germany

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**Session E: 12**

**Time:** 12:00-13:30  
**Location:** Main Building C - C1

### ICT DEMONSTRATION: WRITING IN DIGITAL ENVIRONMENTS: A 21ST CENTURY APPROACH TO ACTIONABLE ANALYTICS

**Chair**  
Sirpa Eskelä-Haapanen, University of Jyväskylä, Finland

**Writing in Digital Environments: A 21st Century Approach to Actionable Analytics**  
Joseph Moxley, USF, United States
<table>
<thead>
<tr>
<th>Session E: 13</th>
<th>Time: 12:00-13:30</th>
<th>Location: Main Building A - A06</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ICT DEMONSTRATION: THE SMI DIGITAL CLASSROOM. A MULTI-STATION DATA COLLECTION FRAMEWORK FOR EDUCATIONAL RESEARCH.</strong></td>
<td></td>
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</tr>
<tr>
<td><strong>Chair</strong></td>
<td>The SMI Digital Classroom. A multi-station data collection framework for educational research.</td>
<td>Markus Plank, SensoMotoric Instruments GmbH, Germany</td>
</tr>
<tr>
<td><strong>Annotations:</strong></td>
<td>The presentation by Markus Plank (The SMI Digital Classroom. A Multi-station Data Collection Framework for Educational Research) is cancelled.</td>
<td></td>
</tr>
<tr>
<td>Session E: 14</td>
<td>Time: 12:00-13:30</td>
<td>Location: Pinni B - B4116</td>
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<tr>
<td><strong>ICT DEMONSTRATION: SUPPORTIVE HINTS IN A DIGITAL ENVIRONMENT TO FOSTER ADOLESCENTS’ EXPOSITORY TEXT COMPREHENSION</strong></td>
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<tr>
<td><strong>Chair</strong></td>
<td>Supportive hints in a digital environment to foster adolescents’ expository text comprehension</td>
<td>Mariës ter Beek, University of Groningen, Netherlands; Leonie Brummer, University of Groningen, Netherlands; Anouk Donker-Bergstra, Rijksuniversiteit Groningen, Dept of Education and GION, Netherlands; Marie-Christine Opdenakker, University of Groningen, Netherlands</td>
</tr>
<tr>
<td>Session E: 15</td>
<td>Time: 12:00-13:30</td>
<td>Location: Main Building E - E301</td>
</tr>
<tr>
<td><strong>WORKSHOP: USING VR TECHNOLOGY TO BRING MORE LEARNING OPPORTUNITIES IN STEM COURSES</strong></td>
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<tr>
<td><strong>Chair</strong></td>
<td>Using VR technology to bring more learning opportunities in STEM courses</td>
<td>Xiaomei Yan, Beijing Normal University, China</td>
</tr>
<tr>
<td>Session E: 16</td>
<td>Time: 12:00-13:30</td>
<td>Location: Pinni B - B3111</td>
</tr>
<tr>
<td><strong>ICT DEMONSTRATION: RESPONDING TO STUDENT WRITING USING SCREENCAST TECHNOLOGY</strong></td>
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<tr>
<td><strong>Chair</strong></td>
<td>Responding to Student Writing Using Screencast Technology</td>
<td>Christopher Anson, North Carolina State University, United States</td>
</tr>
<tr>
<td><strong>Annotations:</strong></td>
<td>Participants who would like to take part in this session are kindly asked to bring their laptop and contact Christopher Anson beforehand (<a href="mailto:chris_anson@ncsu.edu">chris_anson@ncsu.edu</a>) to receive further instructions.</td>
<td></td>
</tr>
</tbody>
</table>
## Session E: 17  
**Time:** 12:00-13:30  
**Location:** Main Building A - A34

**ICT DEMONSTRATION: LET’S TALK STUDENT ENGAGEMENT: CONNECTING TEACHERS AND STUDENTS USING LEARNING ANALYTICS**

**Chair**  
Sui Lin Goel, Windesheim University of Applied Sciences, Netherlands

**Let’s talk student engagement: Connecting teachers and students using learning analytics**  
Marion Blumenstein, University of Auckland, New Zealand; Jenny McDonald, The University of Auckland, New Zealand; Catherine Gunn, The University of Auckland, New Zealand; Steve Leichtweis, The University of Auckland, New Zealand

**ANNOTATIONS:**  
IMPORTANT NOTICE: THIS SESSION WILL TAKE PLACE IN ROOM PINNA A - A1081.

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## Session E: 18  
**Time:** 12:00-13:30  
**Location:** Pinni B - B3110

**ICT DEMONSTRATION: MUSIC, MATH, AND LEGO: USING TANGIBLES ON A MULTI-TOUCH TABLE TO TEACH ABSTRACT CONCEPTS.**

**Chair**  
Benjamin Caspar Fauth, University of Tübingen, Germany

**Music, Math, and LEGO: Using tangibles on a multi-touch table to teach abstract concepts.**  
Jennifer Mueller, University of Tübingen, Germany; Uwe Oestermeier, Leibniz-Institut für Wissensmedien (IWM), Germany; Susana Ruiz Fernandez, Leibniz-Institut für Wissensmedien (IWM), Germany; Peter Gerjets, Leibniz-Institut für Wissensmedien (IWM), Germany

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## Session E: 19  
**Time:** 12:00-13:30  
**Location:** Main Building C - C7

**ICT DEMONSTRATION: VIDEO-BASED ASSESSMENT OF TEACHERS’ PROFESSIONAL VISION OF INCLUSIVE CLASSROOMS**

**Chair**  
Tine Nielsen, University of Copenhagen, Denmark

**Video-based assessment of teachers’ professional vision of inclusive classrooms**  
Karolien Keppens, Ghent University, Belgium; Iris Roose, Ghent University, Belgium; Esther Gheysens, Vrije Universiteit Brussel (VUB), Belgium; Ruben Vanderlind, Ghent University, Belgium; Piet Van Avermaet, Ghent University, Belgium; Katrien Struyven, Vrije Universiteit Brussel, Belgium

**ANNOTATIONS:**  
IMPORTANT NOTICE: THIS SESSION WILL TAKE PLACE IN ROOM MAIN BUILDING A - A06.
<table>
<thead>
<tr>
<th>Session E: 20</th>
<th>Time: 12:00-13:30</th>
<th>Location: Main Building A - A05</th>
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<tbody>
<tr>
<td>WORKSHOP: EXPLORING PEDAGOGICAL AND CURRICULAR DECISIONS FOR RESEARCH BASED ACTIVITIES ACROSS EUROPE.</td>
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<tr>
<td>Chair</td>
<td>Miriam Sarid, Israel</td>
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<tr>
<td>Exploring pedagogical and curricular decisions for research based activities across Europe. Eileen Lübcke, Hamburger Zentrum für Universität ein Lehren und Lernen (HUL), Germany; Anna Heudorfer, Hamburg Centre for University Teaching and Learning, Germany</td>
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<th>Session E: 21</th>
<th>Time: 12:00-13:30</th>
<th>Location: Pinni B - B3117</th>
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</thead>
<tbody>
<tr>
<td>ICT DEMONSTRATION: A DIGITAL PLATFORM FOR THE ASSESSMENT OF COMPETENCIES (D-PAC)</td>
<td></td>
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<tr>
<td>Chair</td>
<td>Tommi Kokkonen, University of Helsinki, Finland</td>
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<tr>
<td>A Digital Platform for the Assessment of Competences (D-PAC) Renske Bouwer, University of Antwerp, Belgium; Marije Lesterhuis, University of Antwerp, Belgium; Maarten Goossens, University of Antwerp, Belgium; Sven De Maeyer, University of Antwerp, Belgium</td>
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<thead>
<tr>
<th>Session E: 22</th>
<th>Time: 12:00-13:30</th>
<th>Location: Pinni A - A2088</th>
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<tbody>
<tr>
<td>ICT DEMONSTRATION: NEW ERA OF COLLABORATION – DEMONSTRATING CONVERSATIONAL KNOWLEDGE CREATION TECHNOLOGY</td>
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<tr>
<td>Chair</td>
<td>Els Boshuizen, Open University of the Netherlands, Netherlands</td>
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<tr>
<td>New era of collaboration – Demonstrating conversational knowledge creation technology Niina Halonen, University of Helsinki, Finland; Kalle Juuti, University of Helsinki, Finland; Erika Maksniemi, University of Helsinki, Finland; Olli Sarvi, University of Helsinki, Finland; Kirsi Lonka, University of Helsinki, Finland</td>
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<thead>
<tr>
<th>Session E: 23</th>
<th>Time: 12:00-13:30</th>
<th>Location: Pinni A - A3103</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICT DEMONSTRATION: CLASSROOM DATA MANAGEMENT AND INTERACTIVE TEACHING WITH ONE NOTE AND EVER NOTE: ICT DEMONSTRATION</td>
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<tr>
<td>Chair</td>
<td>Anne-Elina Salo, University of Turku, Finland</td>
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<tr>
<td>Classroom data management and interactive teaching with OneNote and EverNote: ICT Demonstration Markus Dormann, Otto-Friedrich-Universität Bamberg, Germany</td>
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</table>

**ANNOTATIONS:**

**THIS SESSION HAS BEEN CANCELLED.**
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<tr>
<th>Session E: 24</th>
<th>Time: 12:00-13:30</th>
<th>Location: Main Building A - A33</th>
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<tbody>
<tr>
<td>ICT DEMONSTRATION: ENGAGING GLOBAL BUSINESS EDUCATION – HOW TO IMPLEMENT INNOVATIVE DIGITAL PEDAGOGICAL PRACTICES?</td>
<td>Engaging Global Business Education – How to implement innovative digital pedagogical practices?</td>
<td>Lauri Vaara, University of Helsinki, Finland</td>
</tr>
</tbody>
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<thead>
<tr>
<th>Session E: 25</th>
<th>Time: 12:00-13:30</th>
<th>Location: Main Building A - A31</th>
</tr>
</thead>
<tbody>
<tr>
<td>WORKSHOP: POSITIVE PEDAGOGY AS A TOOL IN THE DIGITAL COMMUNICATION BETWEEN TEACHERS AND CUSTODIANS</td>
<td>Positive pedagogy as a tool in the digital communication between teachers and custodians</td>
<td>Anne-Mari Kuusimaki, University of Helsinki, Finland; Lotta Uusitalo-Malmivaara, University of Helsinki, Finland</td>
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<tr>
<th>Session E: 26</th>
<th>Time: 12:00-13:30</th>
<th>Location: Main Building E - E350</th>
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<tbody>
<tr>
<td>WORKSHOP: QUALITY OF MOOCS: RESULTS OF RESEARCH SURVEYS AND DISCUSSION OF MOOC QUALITY REFERENCE FRAMEWORK</td>
<td>Quality of MOOCs: Results of research surveys and discussion of MOOC Quality Reference Framework</td>
<td>Christian M. Stracke, Open University of the Netherlands, Netherlands</td>
</tr>
</tbody>
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<tr>
<th>KEYNOTES - PART 1:1</th>
<th>Time: 13:45-15:15</th>
<th>Location: Tampere Hall - Small Auditorium</th>
</tr>
</thead>
</table>
KEYNOTES - PART 1:2  |  Time: 13:45-15:15  |  Location: Tampere Hall - Big Auditorium

**EARLI KEYNOTE SESSION: EVIDENCE-BASED EDUCATION AND THE ROLE OF TEACHER EDUCATION**

**Chair**
Daniel Muijs, University of Southampton, United Kingdom

**Evidence-based Education and the Role of Teacher Education**
Manfred Prenzel, Technical University of Munich (TUM), Germany

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KEYNOTES - PART 1:3  |  Time: 13:45-15:15  |  Location: Main Building A - Main Auditorium

**EARLI KEYNOTE SESSION: EYE FOLLOW YOU: EFFECTS OF GAZE CUES ON LEARNING**

**Chair**
Hans Gruber, University of Regensburg, Germany

**Eye Follow You: Effects of Gaze Cues on Learning**
Tamara Van Gog, Utrecht University, Netherlands

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Session F: 1  |  Time: 15:45-17:15  |  Location: Main Building A - A3

**SINGLE PAPER: HIGHER EDUCATION**

**Chair**
Lotta Uusitalo-Malmivaara, University of Helsinki, Finland

**Non-cognitive skills as admission criteria for university: A systematic review**
Tine Nielsen, University of Copenhagen, Denmark; Ida Sophie Friderichsen, University of Copenhagen, Denmark

**The R-Comp - A New Instrument to Assess University Students' Research Competences**
Franziska Boettcher, Freie Universität Berlin, Germany; Felicitas Thiel, Freie Universität Berlin, Germany

**Development and validation of the Reflection in Business Education Questionnaire (RIBEQ)**
Luci Gommers, University of St.Gallen, Switzerland; Tobias Jenert, University of St.Gallen, Switzerland; Taiga Brahms, University of Tübingen, Germany; Dietrich Wagner, University of St.Gallen, Switzerland

**Key situations in service learning initiating reflection on civic engagement**
Karl-Heinz Gerholz, University of Bamberg, Germany; Silvia Leicht, University of Bamberg, Germany; Andreas Rausch, University of Mannheim, Germany
## Session F: 2 | Time: 15:45-17:15 | Location: Linna - K103

### SINGLE PAPER: TEACHER EDUCATION

<table>
<thead>
<tr>
<th>Chair</th>
<th>Teacher resilience in adverse contexts: Issues of professionalism and professional identity</th>
<th>Maria A. Flores, University of Minho, Portugal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merel van der Wal, Radboud University Nijmegen, Netherlands</td>
<td>“Better ask critically…” – A training in critical argumentation for pre-service teachers.</td>
<td>Elisabeth Mayweg-Paus, University of Münster, Germany; Monja Thiebach, University of Münster, Germany; Regina Jucks, WWU Münster, Germany</td>
</tr>
<tr>
<td></td>
<td>What Factors Predict Teachers’ Problem-Solving and Their Seeking of Social Support?</td>
<td>Stephan Kleiblock, Justus Liebig University Gießen / Macquarie University Sydney, Germany; Amina Fraij, Justus Liebig University Gießen, Germany; Jeremy Monsen, Tri Borough Consortium of Educational Psychologists (ELCEP), United Kingdom; Oliver Böhm-Kasper, Bielefeld University, Germany; Vanessa Dizinger, Bielefeld University, Germany</td>
</tr>
<tr>
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<td>Student teachers' beliefs of an ideal teacher training at the university</td>
<td>Barbara Moschner, Carl von Ossietzky Universität Oldenburg, Germany; Juliane Schlesier, University of Oldenburg, Germany; Uta Wagener, University of Oldenburg, Germany; Monika Reimer, Carl von Ossietzky Universität Oldenburg, Germany; Iris Lüschen, Carl von Ossietzky Universität Oldenburg, Germany</td>
</tr>
</tbody>
</table>

## Session F: 3 | Time: 15:45-17:15 | Location: Main Building C - C8

### SINGLE PAPER: PROFESSIONAL DEVELOPMENT AND WORKPLACE LEARNING

<table>
<thead>
<tr>
<th>Chair</th>
<th>Video-based comparative judgement as a method to measure teachers’ professional vision</th>
<th>Iris Roose, Ghent University, Belgium; Piet Van Avermaet, Ghent University, Belgium; Wendelien Vanlieghem, Vrije Universiteit Brussel (VUB), Belgium; Ruben Vanderlinde, Ghent University, Belgium</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marc Stadler, University of Münster, Germany</td>
<td>On the determinants of (in)formal learning of teachers : A cross-sectional mixed-method study</td>
<td>Antoine Lecat, Université catholique de Louvain (UCL), Belgium; Simon Beausaert, Maastricht University, Netherlands; Isabel Raemdonck, Université Catholique de Louvain, Belgium</td>
</tr>
<tr>
<td></td>
<td>Examining teacher self-efficacy in the context of Lesson Study practice</td>
<td>Tijsen Schipper, Windesheim University of Applied Sciences, Netherlands; Olli-Pekka Malinen, Nilo Mäki Institute, Finland; Sui Lin Goei, VU University Amsterdam, Netherlands; Siebrich De Vries, University of Groningen, Netherlands; Klaas van Veen, University of Groningen, Netherlands</td>
</tr>
<tr>
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<td>Relationships between patterns of risk and success concerning the transition into labour market</td>
<td>Anja Gebhardt, University of Teacher Education St.Gallen, Switzerland; Chantal Kamm, University of Zurich, Switzerland; Christian Bruehwiler, University of Teacher Education St.Gallen, Switzerland; Philipp Gonon, Institut für Erziehungswissenschaft, UZH, Switzerland; Stefanie Dernbach, University of Zurich, Switzerland</td>
</tr>
</tbody>
</table>
### Session F: 4 | Time: 15:45-17:15 | Location: Linna - K109

#### SINGLE PAPER: CONCEPTUAL CHANGE

**Chair**  
Gyongyver Molnar, University of Szeged, Hungary

**Multiple perspectives and narratives of the national past in Dutch school history textbooks**  
Marc Kropman, University of Amsterdam, Netherlands; Carla Van Boxtel, University of Amsterdam, Netherlands

**Making history relevant: learning about the history of democracy through challenging group tasks**  
Carla Van Boxtel, University of Amsterdam, Netherlands; Jaap Schuitema, University of Amsterdam, Netherlands

**How much politics is there? Students’ understandings of the role of values in political science**  
Linda Ekström, Luleå University of Technology, Sweden; Cecilia Lundholm, Stockholm University, Sweden

**Students as political animals: Exploring understanding of politics in social science education**  
Cecilia Lundholm, Stockholm University, Sweden; Johan Sandahl, Stockholm University, Sweden

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### Session F: 5 | Time: 15:45-17:15 | Location: Pinni B - B0039

#### SINGLE PAPER: SOCIAL INTERACTION IN LEARNING AND INSTRUCTION - D

**Chair**  
Jenefer Husman, University of Oregon, United States

**The association between educational dialogue and academic performance**  
Hei Muhtonen, University of Jyväskylä, Finland; Eija Pakarinen, University of Jyväskylä, Finland; Helena Rasku-Puttonen, University of Jyväskylä, Finland; Anna-Maija Poikkeus, University of Jyväskylä, Finland; Marja-Kristiina Lerkkanen, University of Jyväskylä, Finland

**School achievement: Does social behavior matter?**  
Julia Becherer, University of Kiel, Germany; Olaf Koeller, Leibniz Institute for Science and Mathematics Education, Germany; Friederike Zimmermann, University of Kiel, Germany

**Interpersonal adaptation in teacher-student interaction**  
Heleen Pennings, Utrecht University, Netherlands; Mieke Brekelmans, Utrecht University, Netherlands; Jan van Tarwijk, Utrecht University, Netherlands

**The Link Between Teacher Self-Efficacy and Student Achievement Depends on Teachers’ Perspective**  
Marjolein Zee, University of Amsterdam, Netherlands; Peter de Jong, Universiteit of Amsterdam, Netherlands; Helma M. Y. Koomen, University of Amsterdam, Netherlands

**ANNOTATIONS:**  
**IMPORTANT NOTICE: THIS SESSION WILL TAKE PLACE IN ROOM MAIN BUILDING D - D14.**
### Session F: 6

**Time: 15:45-17:15**  
**Location: Pinni B - B3111**

#### SINGLE PAPER: EDUCATIONAL EFFECTIVENESS AND TEACHING

| Chair | Effects of Meaning-Focused Instruction on Reading Comprehension in Grade 1 in Estonia and Finland  
Jenni Ruotsalainen, University of Jyväskylä, Finland; Piret Soodla, Tallinn University, Estonia; Anna-Maja Poikkeus, University of Jyväskylä, Finland; Marja-Kristiina Lerkkanen, University of Jyväskylä, Finland  
Utilizing Three Different Lenses to Study Teaching Quality: Do They Lead to Similar Conclusions?  
Evdidiki Kasapi, University of Cyprus, Cyprus; Marina Kenti, University of Cyprus, Cyprus; Kassandra Georgiou Foivou, University of Cyprus, Cyprus; Charalampos Charalambous, University of Cyprus, Cyprus  
Dealing with mistakes in class – (Interactive) effects on students’ achievement and motivation  
Julia Käfer, German Institute for International Educational Research, Germany; Susanne Kuger, The German Institute for International Educational Research (DIPF), Germany; Eckhard Kline, German Institute for International Educational Research (DIPF), Germany; Mareike Kunter, Goethe-Universität Frankfurt, Germany  
Effectiveness of Feedback in a Repeated Spelling Training  
Sophie Gruhn, Radboud University Nijmegen, Netherlands; Eliane Segers, Radboud University Nijmegen / University of Twente, Netherlands; Ludo Verhoeven, Radboud University Nijmegen, Netherlands |
|---|---|

### Session F: 7

**Time: 15:45-17:15**  
**Location: Pinni B - B3107**

#### SYMPOSIUM: ANALYZING TEACHERS’ PEDAGOGICAL CONTENT KNOWLEDGE IN ECONOMIC AND BUSINESS EDUCATION

| Chair | Development of lesson planning competency of prospective business teachers  
Elisabeth Riebenbauer, University of Graz, Austria; Michaela Stock, University of Graz, Austria  
Prospective teachers’ ability to design and provide instructional explanations  
Juergen Seifried, University of Mannheim, Germany; Stefanie Findeisen, University of Mannheim, Germany  
Teachers’ ability to handle students’ errors – results from video analyses in accounting classes  
Patricia Köpfner, Goethe-Universität Frankfurt, Germany; Eveline Wuttke, Goethe-Universität Frankfurt, Germany; Juergen Seifried, University of Mannheim, Germany  
Swiss commercial VET teachers’ pedagogical content knowledge  
Doreen Holtsch, University of Zurich, Switzerland; Johannes Hartig, German Institute for International Educational Research (DIPF), Germany |
|---|---|
Session F: 8  |  Time: 15:45-17:15  |  Location: Virta - 112

**SYMPOSIUM: TEACHERS’ EPISTEMIC COGNITION FOR PROFESSIONAL PRACTICE: A FOCUS ON REFLECTION AND REFLEXIVITY**

**Chair**
Jo Lunn Brownlee, Queensland University of Technology, Australia

**Discussant**
Clark Chinn, Rutgers University, United States

**Changing teachers’ epistemic cognition: A new framework for epistemic reflexivity**
Jo Lunn Brownlee, Queensland University of Technology, Australia; Leila Eve Ferguson, University of Oslo / Kristiania University College, Norway; Mary Ryan, Macquarie University, Australia

**Informed reflexivity: Enacting epistemic virtue**
Mary Ryan, Macquarie University, Australia; Rainer Bromme, University of Münster, Germany; Florian Feucht, The University of Toleda, Germany; Dorothe Kienhues, University of Münster, Germany; Michael Weinstock, Ben-Gurion University of the Negev, Israel

**The social epistemology and reflexivity of teachers’ learning groups**
Michael Weinstock, Ben-Gurion University of the Negev, Israel; Adam Lefstein, Ben-Gurion University of the Negev, Israel; Itay Pollak, Ben-Gurion University of the Negev, Israel

**Professional Development in Dialogic Teaching: The Role of Epistemic Cognition**
Alina Reznitskaya, Montclair State University, United States; Ivar Braton, University of Oslo, Norway; Krista Muis, McGill University, Canada

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Session F: 9  |  Time: 15:45-17:15  |  Location: Main Building A - A32

**SYMPOSIUM: THE RELEVANCE OF PRIOR KNOWLEDGE FOR KNOWLEDGE ACQUISITION IN STEM**

**Chair**
Bianca Simonsmeier, University of Trier, Germany

**Discussant**
Jeroen Van Merrienboer, Maastricht University, Netherlands

**E-assessment as a tool for activating prior knowledge and supporting learning**
Henna Aalakainen, University of Helsinki, Finland; Viivi Virtanen, University of Helsinki, Finland; Jaakke Blomster, University of Helsinki, Finland

**Patterning Knowledge is Foundational to Mathematics Achievement**
Bethany Rittle-Johnson, Vanderbilt University, United States; Emily Fyfe, Indiana University, United States; Erica Zippert, Vanderbilt University, United States

**Prior Knowledge from Elementary School Curricula on Physics Prepares for Future Learning**
Ralph Schumacher, ETH Zurich, Switzerland; Brigitte Hänger-Surer, University of Applied Sciences and Arts Northwestern Switzerland, Switzerland; Lennart Schalk, ETH Zurich, Switzerland; Elisbeth Stern, ETH Zurich, Switzerland

**The Influence of Prior Knowledge on Learning and Transfer: A Meta-Analysis**
Bianca Simonsmeier, University of Trier, Germany; Maja Flieg, University of Trier, Germany; Lennart Schalk, ETH Zurich, Switzerland; Anne Deiglmayr, ETH Zurich, Switzerland; Michael Schneider, University of Trier, Germany
### Session F: 10  
#### SYMPOSIUM: WHAT DO WE KNOW ABOUT POST-PHD EXPERIENCE?

**Chair**  
Montserrat Castelló, Ramon Llull University, Spain

**Discussant**  
David Boud, University of Technology Sydney/Deakin University, Australia

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td>How do the career intentions of PhDs and post-PhDs reflect personal lives and career opportunities?</td>
<td>Lynn McAlpine, University of Oxford, United Kingdom; Cheryl Amundsen, Simon Fraser University, Canada</td>
</tr>
<tr>
<td>Reading the Map of Post-PhD Academic Networks</td>
<td>Isabelle Skakni, University of Oxford / Université Laval, Canada; María del Carmen Calatrava Moreno, Technische Universität Wien, Austria; Mariona Corcelles, Universitat Ramon Llull, Spain; Lynn McAlpine, University of Oxford, United Kingdom</td>
</tr>
<tr>
<td>Interest and function of social support among UK and Spanish post PhD researchers</td>
<td>Kirsi Pyhältö, University of Oulu / University of Helsinki, Finland; Jouni Peltonen, University of Oulu, Finland; Montserrat Castelló, Ramon Llull University, Spain; Lynn McAlpine, University of Oxford, United Kingdom</td>
</tr>
<tr>
<td>Post-PhD researchers’ writer identity development: Relationship between conceptions and experiences</td>
<td>Montserrat Castelló, Ramon Llull University, Spain; Anna Sala-Bubárè, Ramon Llull University, Spain; Nuria Sune-Soler, Ramon Llull University, Spain; Marta Pardo Estruch, Ramon Llull University, Spain</td>
</tr>
</tbody>
</table>

### Session F: 11  
#### SYMPOSIUM: NEGATIVE KNOWLEDGE AT WORK: INSIGHTS FROM FOUR PROFESSIONS

**Chair**  
Martin Gartmeier, Germany

**Discussant**  
Jaana Parviainen, University of Tampere, Finland

<table>
<thead>
<tr>
<th>Title</th>
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<tbody>
<tr>
<td>Developing negative knowledge in contexts of time-competitive culinary training</td>
<td>Charlotte Jonasson, Aarhus University, Denmark</td>
</tr>
<tr>
<td>Effects of problem-solving procedures in error-based learning in the context of medical education</td>
<td>Robin Stark, Saarland University, Germany; Martin Klein, Saarland University, Germany; Nicole Heitzmann, University Munich &amp; Clinics of University Munich, Germany; Martin R. Fischer, University Hospital of LMU Munich, Germany</td>
</tr>
<tr>
<td>Negative Knowledge of Counselors: Relation to Professional Experience and Contextualization</td>
<td>Martin Gartmeier, Technical University of Munich (TUM), Germany; Josef Strasser, University of Augsburg, Germany</td>
</tr>
<tr>
<td>The acquisition of negative knowledge during teacher education</td>
<td>Tina Hascher, University of Bern, Switzerland; Christine Kaiser, University of Salzburg, Germany</td>
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</table>

**Annotations:**  
The presentation by Charlotte Jonasson (Developing negative knowledge in contexts of time-competitive culinary training) is cancelled.
### Session F: 12
**Time:** 15:45-17:15  
**Location:** Main Building E - E350

**SYMPOSIUM: INTEREST, MOTIVATION AND ASPIRATIONS IN STEM: HOW DO THESE FACTORS DEVELOP AND INFLUENCE EACH OTHER?**

**Chair**  
Adam Maltese, Indiana University, United States

**Discussant**  
Adam Maltese, Indiana University, United States

- **The pressure is on: Understanding changes in science motivation and interest from age 10 to 16**  
  Julie Moote, University College London, United Kingdom; Louise Archer, King's College London, United Kingdom; Jennifer DeWitt, King's College London, United Kingdom

- **Motivation and interest-development in traditional physics classrooms in Norway**  
  Maria Veteseter Boe, University of Oslo, Norway

- **What Makes the Difference for Highly Selective Undergraduates Who Continue to Pursue STEM?**  
  K. Ann Renninger, Swarthmore College, United States; Sarah Nielson, Swarthmore College, United States; Meg Nam, Swarthmore College, United States

- **Research Microcultures as Socialization Contexts for Underrepresented Science Students**  
  Dustin Thoman, San Diego State University, United States; Gregg Muragishi, Stanford University, United States; Jessi L. Smith, Montana State University, United States

### Session F: 13
**Time:** 15:45-17:15  
**Location:** Main Building A - A08

**SYMPOSIUM: CO- AND SELF-REGULATION IN EARLY CHILDHOOD – ASSESSMENT, DEVELOPMENT AND INFLUENCING FACTORS**

**Chair**  
Kim Gärtner, Heidelberg University, Germany

**Discussant**  
Franziska Cohen, Freie Universität Berlin, Germany

- **Maternal scaffolding with infants: stability and relations with cognitive and inhibitory development**  
  David Whitebread, University of Cambridge, United Kingdom; Dave Neale, University of Cambridge, United Kingdom

- **Co- and self-regulation in early childhood – the role of parental self-efficacy beliefs**  
  Kim Gärtner, Heidelberg University, Germany; Verena Clara Vetter, Heidelberg University Hospital, Centre for Child and Adolescent Medicine, Germany; Gitta Reuner, Heidelberg University Hospital, Centre for Child and Adolescent Medicine, Germany; Silke Hertel, Ruprecht-Karls-Universität Heidelberg, Germany

- **Executive functions and parent-child interaction during technology-enhanced storytelling**  
  Anne Horvers, Radboud University Nijmegen, Netherlands; Inge Molenaar, Radboud University Nijmegen, Netherlands; Rosa Teepe, Radboud University Nijmegen, Netherlands; Ludo Verhoeven, Radboud University Nijmegen, Netherlands

- **Associations between parenting and children’s executive functions: Contingent on assessment methods?**  
  Debora Valcan, Murdoch University, Australia; Deborah Pino-Pasternak, Murdoch University, Australia; Helen Davis, Murdoch University, Australia; Anabela Malpique, Murdoch University, Australia
### SYMPOSIUM: INSIGHTS ON STUDENT ENGAGEMENT: THE ROLES OF MOTIVATION, EMOTION, AND WELL-BEING

<table>
<thead>
<tr>
<th>Chair</th>
<th>Jennifer Symonds, University College Dublin, Ireland</th>
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<tr>
<td>Discussant</td>
<td>Janne Pietarinen, University of Eastern Finland, Finland</td>
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</table>

- **A new model of student engagement as a dynamic biopsychosocial process**
  
  Jennifer Symonds, University College Dublin, Ireland; Katja Upadyaya, University of Helsinki, Finland; Katriina Salmela-Aro, University of Jyväskylä and University of Helsinki, Finland

- **States of flow and situational engagement: not beyond anxiety, but right at the heart of it**
  
  Julia Moeller, Yale University, United States; Zorana Ivcevic, Yale Center for Emotional Intelligence, United States; Arielle White, Yale Center for Emotional Intelligence, United States

- **Sixth and eighth graders’ socially embedded emotions in formal and informal school situations**
  
  Henrika Anttila, University of Helsinki, Finland; Kirsi Pyhältö, University of Oulu / University of Helsinki, Finland; Tiina Soini-Ikonen, University of Tampere, Finland; Janne Pietarinen, University of Eastern Finland, Finland

- **Early intervention for pupils at risk of underachievement and educational disengagement**
  
  Seanneen Sican, University College Dublin, Ireland; Karen Winter, Queen’s University Belfast, United Kingdom; Fiona Lynn, Queen’s University Belfast, United Kingdom; Aiden Gildea, Queen’s University Belfast, United Kingdom; Paul Connolly, Queen’s University Belfast, United Kingdom

### SYMPOSIUM: TRANSPARENCY IN ASSESSMENT – EXPLORING THE INFLUENCE OF EXPLICIT ASSESSMENT CRITERIA

<table>
<thead>
<tr>
<th>Chair</th>
<th>Anders Jonsson, Kristianstad University, Sweden</th>
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<tr>
<td>Organiser</td>
<td>Anders Jonsson, Kristianstad University, Sweden</td>
</tr>
<tr>
<td>Discussant</td>
<td>Frans Prins, Utrecht University, Netherlands</td>
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</tbody>
</table>

- **Can rubrics make assessment standards and criteria transparent?**
  
  Berry O’Donovan, Oxford Brookes University, United Kingdom

- **Effects on student motivation and performance by increased transparency in assessment**
  
  Andreia Balan, SFF Helsingborg, Sweden; Anders Jonsson, Kristianstad University, Sweden

- **Problematising representative perspectives of standards in the assessment discourse**
  
  Rola Ajjawi, Deakin University, Australia; Margaret Bearman, Deakin University, Australia

- **Assessment criteria and standards, social moderation and professional conversations about quality**
  
  Claire Wyatt-Smith, Australian Catholic University, Australia
### Session F: 16
**Time:** 15:45-17:15  **Location:** Virta - 114

**SYMPOSIUM: CIVIC COMPETENCE AND CITIZENSHIP IDENTITY IN ICCS 2016: COUNTRY SPECIFIC ISSUES AND ANALYSES**

<table>
<thead>
<tr>
<th>Chair</th>
<th>Discussant</th>
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<tbody>
<tr>
<td>Eveline Gutzwiller-Helfenfinger, University of Teacher Education of Lucerne, Switzerland</td>
<td>Maria Magdalena Isaac, University of Groningen, Netherlands</td>
</tr>
</tbody>
</table>

**Association between Online Political Discussion and Academic Achievement of Norwegian adolescents**
Lihong Huang, Høgskolen i Oslo og Akershus, Norway; Kristinn Hegna, NOVA – Norwegian Social Research, Oslo and Akershus University College of Applied Sciences, Norway; Guro Odegard, NOVA – Norwegian Social Research, Oslo and Akershus University College of Applied Sciences, Norway

**Social development in school: A comparison of civic competences between 8th and 12th grade students**
Dorien Sampermans, KU Leuven, Belgium; Ellen Claes, KU LEUVEN, Belgium

**Identity Formation as Catalyst of Tolerance**
Johanna Fee Zieimes, University of Duisburg-Essen, Germany; Hermann J. Abs, University of Duisburg-Essen, Germany

**Acculturation as an indicator of educational inequality**
Janina Jasper, University of Duisburg-Essen, Germany; Hermann J. Abs, University of Duisburg-Essen, Germany

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### Session F: 17
**Time:** 15:45-17:15  **Location:** Virta - 120

**SYMPOSIUM: INVESTIGATING IN-SERVICE AND PRE-SERVICE TEACHERS’ PROMOTION OF SRL THROUGH CLASSROOM OBSERVATION**

<table>
<thead>
<tr>
<th>Chair</th>
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<tr>
<td>Zemira Mevarech, Bar-Ilan University, Israel</td>
<td>Erik De Corte, KU Leuven, Belgium</td>
</tr>
</tbody>
</table>

**Insights into teachers’ promotion of SRL in primary and secondary mathematics classrooms**
Charlotte Dignath, Goethe-University Frankfurt, Germany; Gerhard Buettner, University of Frankfurt, Germany

**Exploring diversity in teachers’ implementation of self-regulated learning in primary schools**
Mona De Smul, University of Ghent, Belgium; Hilde Van Keer, Ghent University, Belgium; Sofie Heirweg, Ghent University, Belgium; Geert Devos, Ghent University, Belgium

**Effects of Scaffolding Level on Preservice Teachers’ Professional Vision & Capacity to Teach SRL**
Tova Michalsky, Bar-Ilan University, Israel

**The Effects of Using Video Clip Analyses on Teachers’ Explicit vs Implicit Implementations of SRL**
Zemira Mevarech, Bar-Ilan University, Israel; Tova Michalsky, Bar-Ilan University, Israel; Galit Shabtai, Bar-Ilan University, Israel
### Session F: 18 | Time: 15:45-17:15 | Location: Main Building A - A05

#### INVITED SYMPOSIUM: THE ROLE OF THEORY IN RESEARCH

**Chair**
Giuseppe Ritella, University of Helsinki, Finland

**Organiser**
Rupert Wegerif, University of Exeter, United Kingdom

**Discussant**
Baruch Schwarz, Hebrew University of Jerusalem, Israel

<table>
<thead>
<tr>
<th>Title</th>
<th>Speakers</th>
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<tbody>
<tr>
<td>The generality-concreteness antimony, variance accounted for, and situation specificity</td>
<td>Jean-Luc Patry, University of Salzburg, Austria</td>
</tr>
<tr>
<td>Conceptualizing one’s own teaching activity: An account of a teacher’s expansive learning journey</td>
<td>Antti Rajala, University of Helsinki, Finland; Annalisa Sannino, University of Helsinki, Italy</td>
</tr>
<tr>
<td>Collaboration, creativity, embodiment and affect – a methodological journey</td>
<td>Eva Vass, Western Sydney University, Australia; Gabriella Deszpot, Liszt Ferenc Academy of Music, Hungary</td>
</tr>
<tr>
<td>Double-loop reflection and educational research</td>
<td>Rupert Higham, University of Cambridge, United Kingdom; Rupert Wegerif, University of Exeter, United Kingdom</td>
</tr>
</tbody>
</table>

### Session F: 19 | Time: 15:45-17:15 | Location: Pinni B - B4113

#### INVITED SYMPOSIUM: CLASSROOM COMPOSITION RESEARCH ON SOCIAL-EMOTIONAL OUTCOMES

**Chairs**
Carmen Zurbriggen, University of Fribourg, Switzerland; Christoph Müller, University of Fribourg, Germany

**Discussant**
Dieter Baeyens, KU Leuven, Belgium

<table>
<thead>
<tr>
<th>Title</th>
<th>Speakers</th>
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<tbody>
<tr>
<td>An overview of classroom composition research on social-emotional outcomes</td>
<td>Christoph Müller, University of Fribourg, Germany; Carmen Zurbriggen, University of Fribourg, Switzerland</td>
</tr>
<tr>
<td>Does classroom composition affect school satisfaction of students with special educational needs?</td>
<td>Katja Scharenberg, University of Education Freiburg, Germany; Wolfram Rollett, University of Education Freiburg, Germany; Wilfried Bos, TU Dortmund University, Germany</td>
</tr>
<tr>
<td>Antisocial behavior among adolescents: The influence of classmates` prosocial behavior</td>
<td>Verena Hofmann, University of Fribourg, Switzerland; Christoph Müller, University of Fribourg, Germany</td>
</tr>
<tr>
<td>Comparison of the group actor-partner interdependence model and a latent-manifest contextual model</td>
<td>Carmen Zurbriggen, University of Fribourg, Switzerland; Rob Gommans, Utrecht University, Netherlands; Martin Venetz, University of Applied Sciences of Special Needs Education Zurich, Switzerland</td>
</tr>
</tbody>
</table>
INVITED SYMPOSIUM: CHALLENGES IN SCHOOL IMPROVEMENT RESEARCH IN A MULTILEVEL CONTEXT

Chair
Katharina Maag Merki, University of Zurich, Switzerland

Organisers
Katharina Maag Merki, University of Zurich, Switzerland; Tobias Feldhoff, Johannes Gutenberg University of Mainz, Germany; Arnoud Oude Groote Beverborg, Johannes Gutenberg University of Mainz, Germany; Falk Radisch, Institute of school education and educational research, Germany

Discussant
Melanie Ehren, UCL Institute of Education, United Kingdom

Challenges and requirements in school improvement research
Tobias Feldhoff, Johannes Gutenberg University of Mainz, Germany; Falk Radisch, Universität Rostock, Germany

Exploring processes and outcomes through a mixed methods design
Geert Devos, Ghent University, Belgium; Benedicte Vanblaere, Ghent University, Belgium

Diversity in learning trajectories. Towards a tangible conceptualization of dynamic processes
Arnoud Oude Groote Beverborg, Johannes Gutenberg University of Mainz, Germany; John Geerlings, Utrecht University, Netherlands; Peter Sleegers, BMC Advies, Netherlands; Tobias Feldhoff, Johannes Gutenberg University of Mainz, Germany; Klaas van Veen, University of Groningen, Netherlands; Maarten Wijnants, Radboud University Nijmegen, Netherlands

The importance of measurement equivalence for predictor models across countries
Catalina Lamos, LISR - Luxembourg Institute for Socio Economic Research, Luxembourg

Annotations:
The presentation by Catalina Lamos (The importance of measurement equivalence for predictor models across countries) is cancelled.

INVITED SYMPOSIUM: FACTORS FOSTERING METACOGNITIVE MONITORING AND CONTROL

Chair
Elisabeth Pieger, Germany

Organisers
Elisabeth Pieger, Technical University of Munich (TUM), Germany; Mariette van Loon, University of Bern, Switzerland

Discussant
Philip Winne, Simon Fraser University, Canada

Analytic monitoring and disfluency: The role of fluency-contrasts
Elisabeth Pieger, Technical University of Munich (TUM), Germany; Christoph Mengelkamp, University of Würzburg, Germany; Maria Bannert, Technical University of Munich (TUM), Germany

Feedback Improves Kindergartners’ Self-Monitoring and Self-Rewarding
Mariette van Loon, University of Bern, Switzerland; Claudia Roebers, University of Bern, Switzerland, Switzerland

Does access to the Internet foster or bias metacognitive judgments?
Stephanie Pieschl, University of Newcastle, Australia

Self-Regulated Learning and Agenda-Setting: How Difficulty and Reward Affect Study Decisions
Anique de Bruin, Maastricht University, Netherlands; Luciana Falbo, Maastricht University, Netherlands; Peter Stiers, Maastricht University, The Netherlands, Netherlands; Tamara Van Gog, Utrecht University, Netherlands
## INVITED SYMPOSIUM: INTERACTION-BASED INTERVENTIONS THAT TRANSFORM LEARNING: ENGAGING IN RESEARCH WITH SOCIAL IMPACT

**Chairs**
Sandra Racionero Plaza, Spain; Ester Miquel, Autonomous University of Barcelona, Spain

**Organiser**
Rocio Garcia-Carrion, University of Deusto, Spain

**Discussant**
Auli Toom, University of Helsinki, Finland

**Characterizing learning to learn together skills with web 2.0 technology**
Manoli Pifarré Turmo, University of Lleida, Spain; Li Li, University of Exeter, China

**Teacher collaboration as a central axis of the staff-development model**
Ester Miquel, Autonomous University of Barcelona, Spain; David Duran Gisbert, Universitat Autònoma de Barcelona, Spain; Marta Flores, UAB Universitat Autònoma de Barcelona, Spain

**Peer Learning Network**
Exploring the impact of Reading and Sharing upon Autobiographical and Emotional Memory
Sandra Racionero Plaza, Loyola University Andalucia, Spain; Leire Ugalde, UPV/EHU, Spain; Lidia Puigvert, University of Cambridge, UK, Spain; Carmen Martín-Gómez, Universidad Loyola Andalucia, Spain

**Impact of Interactive Groups & Dialogic Literary Gatherings on learning gains & prosocial behaviour**
Rocio Garcia-Carrion, University of Deusto, Spain; M. Lourdes Villardón, Universidad de Deusto, Spain; Zoe Martínez-de-la-Hidalga, University of Deusto, Spain

## INVITED SYMPOSIUM: THE LEARNING SCIENCES: TOPICS AND TRENDS IN THEORY, RESEARCH AND METHODS

**Chair**
Susan Goldman, University of Illinois at Chicago, United States

**Discussant**
Kimberley Gomez, University of California, Los Angeles, United States

**Advances in research on processes and mechanisms of learning and interaction**
Susan Goldman, University of Illinois at Chicago, United States

**Advances in research on the Design of learning environments for complex learning**
Frank Fischer, Ludwig-Maximilians-Universität (LMU), Germany

**Research Methods and Analytic Strategies**
Louis Gomez, University of California, Los Angeles, United States; James Pelagragno, University of Illinois at Chicago, United States; Peter Reimann, University of Sydney, Australia

**Advances and trends in teaching the Learning Sciences**
Freydis Vogel, Technical University of Munich (TUM), Germany; Daniel Sommerhoff, Ludwig-Maximilians-Universität (LMU), Germany
**SYMPOSIUM: INFLUENCES ON TEACHERS' JUDGMENT ACCURACY CONCERNING STUDENT ACHIEVEMENT AND EDUCATIONAL TRANSITIONS**

**Chair**  
Barbara Gasteiger-Klicpera, University of Graz, Austria; Edvina Bešić, University of Graz, Austria

**Discussant**  
Janneke van de Pol, Utrecht University, Netherlands

<table>
<thead>
<tr>
<th>Topic</th>
<th>Authors</th>
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<tbody>
<tr>
<td>How accurately do teachers judge their students' reading abilities?</td>
<td>Barbara Gasteiger-Klicpera, University of Graz, Austria; Lisa Paleczek, University of Graz, Austria; Susanne Seifert, University of Graz, Austria</td>
</tr>
<tr>
<td>Results of a Multilevel Analysis</td>
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<tr>
<td>Are teachers able to predict students' reading development?</td>
<td>Alfred Schabmann, University of Cologne, Germany; Barbara Maria Schmidt, Universität zu Köln/ University of Cologne, Germany; Thomas Hennemann, University of Cologne, Germany</td>
</tr>
<tr>
<td>Teachers' expertise in assessing written composition</td>
<td>Ann-Kathrin Hennes, University of Cologne, Germany; Barbara Maria Schmidt, Universität zu Köln/ University of Cologne, Germany; Igor Osipov, Universität zu Köln/ University of Cologne, Germany; Alfred Schabmann, University of Cologne, Germany</td>
</tr>
<tr>
<td>Changes in the accuracy of teachers' transition decisions following instruction and training</td>
<td>Ineke Pit-ten Cate, University of Luxembourg, Luxembourg; Sabine Krolak-Schwerdt, University of Luxembourg, Luxembourg; Thomas Hoerstermann, University of Luxembourg, Luxembourg; Sabine Glock, University of Wuppertal, Germany</td>
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WEDNESDAY, 30 AUGUST 2017
## WEDNESDAY, 30 AUGUST 2017

### Session F: 25

**Time:** 15:45-17:15  
**Location:** Main Building A – A2B

### SYMPOSIUM: WHAT DOES IT TAKE TO BE MOTIVATED – THE IMPACT OF SOCIAL RELATIONSHIPS AND SOCIAL SKILLS

<table>
<thead>
<tr>
<th>Title</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>The motivating role of peers &amp; teachers among Russian and Filipino students - A Motivation Typology</td>
<td>Frances Hoferichter, University of Greifswald, Germany; Olga Bakadorova, Ernst-Moritz-Arndt- University, Germany; Diana Raufelder, Ernst-Moritz-Arndt-University, Germany</td>
</tr>
<tr>
<td>Grit in the Classroom: How to Improve Motivation and Learning Outcomes</td>
<td>Christian Krekel, London School of Economics and Political Science, United Kingdom</td>
</tr>
<tr>
<td>Enhancing students’ motivation – the impact of teacher support and teacher- parent partnership</td>
<td>Charlott Rubach, University of Potsdam, Germany; Rebecca Lazarides, University of Potsdam, Germany</td>
</tr>
<tr>
<td>Inter-individual differences in social motivation related to Self-determination &amp; school-engagement</td>
<td>Alexander Lätsch, University of Greifswald, Germany; Diana Raufelder, Ernst-Moritz-Arndt-University, Germany</td>
</tr>
</tbody>
</table>

### Chair

Frances Hoferichter, University of Greifswald, Germany

### Discussant

Riika Hirvonen, University of Jyväskylä, Finland
SINGLE PAPER: TEACHING AND TEACHER EDUCATION - G

Chair
Lisbeth M Brevik, University of Oslo, Norway

Do teachers like to read? Profiles of pre-service teachers’ reading attitudes
Iris Vansteelandt, AP University College/Ghent University, Belgium; Suzanne E. Mol, Leiden University, Netherlands; Hilde Van Keer, Ghent University, Belgium

Teachers and Game-based Pedagogy: Meaningful Implementations and Necessary Competences
Marjaana Kangas, University of Lapland, Finland; Tuula Nousiainen, University of Jyväskylä, Finland; Jenni Rikal, University of Jyväskylä, Finland; Mikko Vesisenaho, University of Jyväskylä, Finland

Promoting Primary School Teachers Assessment Competence via a Training Program Combined with Diaries
Julia Klug, University of Vienna, Austria

DUAL VET in Spain: current situation and attitudes of VET teachers towards dual VET
Pilar Pineda, Universitat Autonoma de Barcelona, Spain; Laura Arnau-Sabatés, UAB Universitat Autònoma de Barcelona, Spain; Anna Ciraso, Universitat Autònoma de Barcelona, Italy

SINGLE PAPER: ASSESSMENT AND ACHIEVEMENT

Chair
David Bergin, University of Missouri/Columbia, United States

Is truancy contagious? Context effects of schools with a high proportion of truant students
Christine Saelzer, TUM School of Education, Germany; Andrea B. Erzinger, University of Teacher Education St.Gallen, Switzerland

The effects of grade retention
Barbara Drechsel, University of Bamberg, Germany; Christine Saelzer, TUM School of Education, Germany; Marcus Pietsch, Leuphana Universität Lüneburg, Germany; Katharina M. Müller, Leuphana Universität Lüneburg, Germany; Timo Ehmke, Leuphana Universität Lüneburg, Germany

Supporting struggling students in Finnish basic education: Multilevel predictors of science scores
Mari-Pauliina Vainikainen, University of Helsinki, Finland; Ninja Hienonen, University of Helsinki, Finland; Helena Thuneberg, University of Helsinki, Finland; Jarkko Hautamaki, University of Helsinki, Finland

Do socioeconomic factors outperform immigration background regarding school achievements?
Andrea B. Erzinger, University of Teacher Education St.Gallen, Switzerland; Daniela Jäger-Biela, German Institute for International Educational Research, Germany

ANNOTATIONS:
The presentation by Christine Saelzer (Is truancy contagious? Context effects of schools with a high proportion of truant students) is cancelled and replaced by Sanne van der Ven (Do rewards enhance learning? The effect of a reward prospect on information processing: An EEG study).
The presentation by Barbara Drechsel (The effects of grade retention) is cancelled.
## SINGLE PAPER: MOTIVATION AND EMOTION - J

<table>
<thead>
<tr>
<th>Chair</th>
<th>Motivation for teacher professional development: The role of decision contexts and age</th>
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<tr>
<td>Barbara Gasteiger-Klicpera, University of Graz, Austria</td>
<td>Folke Glastra, Leiden University, Netherlands; Cornelis de Brabander, Leiden University, Netherlands</td>
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<tr>
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<td>Measuring multiple dimensions of early literacy motivation through self-report at school entry</td>
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<td>Ern McTigue, University of Stavanger, Norway; Oddny Judith Solheim, The Norwegian Reading Centre, Norway; Bente Walgermo, University of Stavanger, Norway; Jan Frijters, Brock University, Canada</td>
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<td>Teacher’s self-efficacy as predictors of their classroom behaviours</td>
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<td>Sindu George, Monash University, Australia</td>
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<td>Students’ Beliefs Concerning School Transition to Lower Secondary School in Finland</td>
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<td>Sirpa Eskelä-Haapanen, University of Jyväskylä, Finland; Kati Vasalampi, University of Jyväskylä, Finland; Marjaa-Kristiina Lerkkanen, University of Jyväskylä, Finland; Anna-Maija Poikkeus, University of Jyväskylä, Finland</td>
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## SINGLE PAPER: ASSESSMENT METHODS AND TOOLS - C

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<tr>
<th>Chair</th>
<th>Regulation on line during early-readers’ writing: a situated model of teacher’s assessment activity</th>
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<tr>
<td>Kyosuke Kakinuma, Doshisha University, Japan</td>
<td>Lionel Dechamboux, University of Geneva, Switzerland</td>
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<td>Empowering teacher’s assessment literacy: A study on the value of professionalization programs</td>
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<td>Fer Boei, Windesheim University of Applied Sciences, Netherlands; Kitty Meijer, Utrecht University of Applied Sciences, Netherlands; Jeroen Van der Linde, Hogeschool van Arnhem en Nijmegen/HAN University, Netherlands; Fedor De Beer, Hogeschool van Arnhem en Nijmegen/HAN University, Netherlands; Dominique Sluijermans, Zuyd University of Applied Sciences, Netherlands; Tamara Van Schild-Mol, Hogeschool van Arnhem en Nijmegen/HAN University, Netherlands</td>
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<td>Best of two worlds in writing assessment: Integrating benchmarking and comparative judgement</td>
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<td>Marije Lesterhuis, University of Antwerp, Belgium; Fien De Smedt, Ghent University, Belgium; Renske Bouwer, University of Antwerp, Belgium; Hilde Van Keer, Ghent University, Belgium; Sven De Maeyer, University of Antwerp, Belgium</td>
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<td>Blind faith and unseen exams: What research has to say about the choice between seen vs unseen exams</td>
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<td>Cathal O’Siochru, Liverpool Hope University, United Kingdom; Melissa Ryan, Liverpool Hope University, United Kingdom</td>
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</table>
### Session G: 5  
**Time:** 08:30-10:00  
**Location:** Linna - K110

#### SINGLE PAPER: EDUCATIONAL THEORY - B

**Chair**  
Charles Max, University of Luxembourg, Luxembourg

**Teaching Responsible Research and Innovation as a part of the Nature of Science**  
Antti Laherto, University of Helsinki, Finland; Lorenz Kampschulte, Leibniz Institute for Science and Mathematics Education (IPN), Germany; Jan Apotheker, University of Groningen, Netherlands; Milika de Vocht, University of Helsinki, Finland; Ron Blonder, Weizmann Institute of Science, Israel; Sevil Akaygun, Bogazici University, Turkey

*This is not my life: Disrupting dominant cycles of knowing/being in educational research.*  
Tim Corcoran, Deakin University, Australia

**Ask What Your Country Can Do For You: Basic Education Policies in the Welfare State**  
Carolin Knauber, German Institute for Adult Education - Leibniz Centre for Lifelong Learning, Germany; Alexandra Ioannidou, German Institute for Adult Education - Leibniz Centre for Lifelong Learning, Germany

**Independence or interdependence? Dialogue-theoretical problems of ‘independent’ learning**  
Tina Kullenberg, Kristianstad University, Sweden; Anders Eklöf, Kristianstad University, Sweden; Lars-Erik Nilsson, Kristianstad University, Sweden

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### Session G: 6  
**Time:** 08:30-10:00  
**Location:** Pinni B - B1097

#### SINGLE PAPER: WRITING AND LITERACY

**Chair**  
Janina Lehmann, Ulm University, Germany

**Learning to mean: The transfer of grammar knowledge to the shaping of rhetorical intentions**  
Susan Jones, University of Exeter, United Kingdom; Debra Myhill, University of Exeter, United Kingdom; Helen Lines, University of Exeter, United Kingdom

**Teachers’ stories about writing: Exploring identities through autobiographical creative writing**  
Anne Martin, University of Jyväskylä, Finland

**Voicing Grammatical Knowledge: Young Writers’ Articulation of Grammatical Concepts**  
Helen Lines, University of Exeter, United Kingdom; Debra Myhill, University of Exeter, United Kingdom; Susan Jones, University of Exeter, United Kingdom

**The Inspiration Myth: how professional writers manage the planning process**  
Debra Myhill, University of Exeter, United Kingdom
Session G: 7 | Time: 08:30-10:00 | Location: Pinni B - B4117

**SINGLE PAPER: DOCTORAL AND RESEARCHER EDUCATION**

**Chair**
Katharina Loibl, University of Education Freiburg, Germany

**What are ethics in doctoral supervision, and how do they matter?**
Erika Løflström, University of Helsinki, Finland; Kirsi Pyhälä, University of Oulu / University of Helsinki, Finland

**Becoming a university teacher: doctoral students’ conceptualizations of online teaching portfolios**
Helga Dorner, Central European University, Hungary; Joanna Renc-Roe, Central European University, Hungary

**Doctoral students’ engagement in knowledge creation practices**
Viivi Virtanen, University of Helsinki, Finland; Jenna Vekkala, University of Helsinki, Finland; Jani Kukkola, University of Jyväskylä, Finland; Liezel Frick, Stellenbosch University, South Africa; Kirsi Pyhälä, University of Oulu / University of Helsinki, Finland

**The doctorate as a quest: PhD students purposively navigating their doctoral paths**
Isabelle Skakni, University of Oxford / Université Laval, Canada

**Annotations:**
The presentation by Helga Dorner (Becoming a University Teacher: Doctoral Students’ Conceptualizations of Online Teaching Portfolios) is cancelled.

Session G: 8 | Time: 08:30-10:00 | Location: Virta - 114

**SINGLE PAPER: ACHIEVEMENT AND SCIENCE EDUCATION**

**Chair**
José van der Hoeven, CED Groep, Netherlands

**Enhanced Concept Learning in Kinematics by Means of Formative Assessment**
Andreas Lichtenberger, ETH Zurich, Switzerland; Clemens Wagner, Physics Department ETH Zurich, Switzerland; Andreas Vaterlaus, Physics department eth, Switzerland

**Understanding Coulomb’s law by means of inventing with contrasting cases**
Elisbeth Stern, ETH Zurich, Switzerland; Lennart Schalk, ETH Zurich, Switzerland; Ralph Schumacher, ETH Zurich, Switzerland

**Reflections from Research: considerations for the implementation of educational simulations**
Koen Veermans, University of Turku, Finland; Tomi Jaakkola, University of Turku, Finland

**Who speaks Physics? The importance of language competence for physics understanding**
Ursina Markwalder, ETH Zurich, Switzerland; Elisbeth Stern, ETH Zurich - Research on Learning and Instruction, Switzerland; Lennart Schalk, ETH Zurich - Research on Learning and Instruction, Switzerland
### Session G: 9  
**Time:** 08:30-10:00  
**Location:** Main Building E - E301

#### SINGLE PAPER: CONCEPTUAL CHANGE - B

**Chair**  
Luce Claessens, Utrecht University, Netherlands

**Erroneously solving multiplicative and additive word problems: A matter of preferences and abilities**  
Tine Degrande, KU Leuven, Belgium; Lieven Verschaffel, KU Leuven, Belgium; Wim Van Dooren, KU Leuven, Belgium

**The Facilitating Role of Analogies in Understanding Scientific Texts**  
Irina Skopeliti, University of Patras, Greece; Stella Vosniadou, National and Kapodistrian University of Athens / Flinders University of Australia, Greece

**Models as relational categories in science education – insights from cognitive science**  
Tommi Kokkonen, University of Helsinki, Finland

**A longitudinal study of the development of science knowledge among 4th to 8th grade students**  
Erzsébet Korom, University of Szeged, Hungary; Erzsébet Antal, University of Szeged, Hungary; Zsófa Gabriella Szabó, University of Szeged, Hungary; György Molnar, University of Szeged, Hungary; Benő Csapó, University of Szeged, Hungary

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### Session G: 10  
**Time:** 08:30-10:00  
**Location:** Main Building A - A4

#### SINGLE PAPER: MOTIVATION AND EMOTION - L

**Chair**  
Irina Lokhtina, University of Central Lancashire, Cyprus

**Diurnal Cortisol Patterns, Motivational and Socio-Emotional Regulation in University Students**  
Katherine Cheng, University of Nebraska, Lincoln, United States; Jenefer Husman, University of Oregon, United States; Reinhard Pekrun, Ludwig-Maximilians-Universität (LMU), Germany

**Beneficial for all? Differential effects of an autonomy-supportive intervention in the classroom**  
Barbara Flunger, Utrecht University, Netherlands; Axel Mayer, RWTH Aachen University, Germany; Nora Umbach, University Tübingen, Germany

**Interest profiles of Finnish 6th graders: Are they related to academic well-being and grades?**  
Maija Nuorteva, University of Helsinki, Finland; Lauri Hietajärvi, University of Helsinki, Finland; Kirsi Lonka, University of Helsinki, Finland

**Factor Structure of a 3 x 2 Student Achievement Goal Orientation Inventory in Math**  
Hadley Solomon, University of New Hampshire, United States; Carla Evans, University of New Hampshire, United States; Suzanne Graham, University of New Hampshire, United States; Te-Hsin Chang, University of New Hampshire, United States
**SINGLE PAPER: VOCATIONAL EDUCATION AND WORKPLACE LEARNING**

<table>
<thead>
<tr>
<th>Chair</th>
<th>Context factors and individual prerequisites fostering apprentices’ intrapreneurship competence</th>
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<tr>
<td></td>
<td>Christine Kreuzer, Ludwig-Maximilians-Universität (LMU), Germany; Sandra Bley (geb. Trost), Ludwig-Maximilians-Universität, Germany; Susanne Weber, Ludwig-Maximilians-Universität (LMU), Germany</td>
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**Knowledge-creative context as mediator for determinants of innovative work behaviour**

Michael Hellwig, University of Regensburg, Germany; Gerhard Messmann, Department of Educational Science, University of Regensburg, Germany; Regina Mulder, University of Regensburg, Germany

**ePortfolio systems in Norwegian vocational education and training (VET); an exploratory study.**

Leif Christian Lahn, University of Oslo, Norway; HÆGE NORE, INSTITUTE OF VOCATIONAL TEACHER EDUCATION, HIQA, Norway

**Supportive behaviours in the VE classroom. How vocational education teachers scaffold learning.**

Antonia Scholkmann, University of Hamburg, Germany; Jens Siemon, University of Hamburg, Germany; Tekla Paulsen, University of Hamburg, Germany

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**SINGLE PAPER: LEARNING AND INSTRUCTION WITH COMPUTERS - C**

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<th>Chair</th>
<th>Embodied Metaphors and Computing Education</th>
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<td></td>
<td>Peter McKenna, University of Edinburgh, United Kingdom; Andrew Manches, University of Nottingham, United Kingdom; Thusha Rajendran, Heriot-Watt University, United Kingdom; Judy Robertson, University of Edinburgh, United Kingdom</td>
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**A model of immersion for learning in relation to learners’ characteristics and cognitive load**

 Yiannis Georgiou, Cyprus University of Technology, Cyprus; Eleni Kyza, Cyprus University of Technology, Cyprus

**Hava : Collaborative Learning of first aid gestures with a multi-touch table**

Jonathan Groff, Telecom-ParisTech- I3 - CNRS, France

**Teachers’ and pupils’ acceptance of tablet devices: A longitudinal study.**

Hannelore Montnieuw, Ghent University, Belgium; Tammy Schellens, Ghent University, Belgium

**ANNOTATIONS:**

THE PRESENTATION BY JONATHAN GROFF (HAVA : COLLABORATIVE LEARNING OF FIRST AID GESTURES WITH A MULTI-TOUCH TABLE) IS CANCELLED.
### Session G: 13  
**Time:** 08:30-10:00  
**Location:** Pinni B - B4113

**SINGLE PAPER: TEACHER EDUCATION AND COMMUNITIES OF PRACTICE**

**Chair**  
Jekaterina Rogaten, Open University, United Kingdom

**The International Lexicon Project: Project Methodology with Illustrations from Japan and Australia.**  
Yoshinori Shimizu, University of Tsukuba, Japan; Carmel Mesiti, University of Melbourne, Australia; Yuka Funahashi, Nara University of Education, Japan

**Chilean Lexicon of middle-school mathematics teaching: insights from a developing educational system**  
Elisa Calcagni, University of Cambridge, United Kingdom; Valeska Grau, Pontificia Universidad Católica de Chile, Chile

**The Finnish Lexicon: Prioritising the organising and shaping of practice over mathematical content**  
Fritjof Sahlinström, Åbo Akademi University, Finland; Markku Hannula, University of Helsinki, Finland

**Using video clubs to developing teachers’ thinking and practice in feedback and dialogic teaching**  
Peter Davies, University of Birmingham, United Kingdom; Tom Perry, University of Birmingham, United Kingdom; Josephine Brady, University of Birmingham, United Kingdom

### Session G: 14  
**Time:** 08:30-10:00  
**Location:** Linna - K103

**SINGLE PAPER: EMOTION AND AFFECT**

**Chair**  
Marianne Schuepbach, University of Bamberg, Germany

**How children with different levels of mathematics anxiety perceive and approach mathematical tasks.**  
Sonia White, Queensland University of Technology, Australia; Kate Williams, Queensland University of Technology (QUT), Australia; Maria Viviani, Queensland University of Technology (QUT), Australia; Lyn English, Queensland University of Technology (QUT), Australia

**How 1st year study engagement predicts later situational task value and daily emotional experiences?**  
Elina E. Ketonen, University of Helsinki, Finland; Lars-Erik Malmberg, University of Oxford, United Kingdom; Hanni Muukkonen, University of Oulu, Finland; Katarina Salmela-Aro, Helsinki Collegium for Advanced Studies, Finland; Kirsti Lonka, University of Helsinki, Finland

**The effect of study skills courses on learning-related emotions**  
Verena Schmied, University of Kassel, Germany; Martin Haenze, University of Kassel, Germany

**Implications of emotional experience and perceived competence on achievement in mathematics**  
Natacha Boissicat, Université Grenoble Alpes, France; Michael Fartoukh, Université de Nice Sophia-Antipolis, France; Jérémy Pouille, Université Grenoble Alpes, France
### SINGLE PAPER: HIGHER EDUCATION - N

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<tr>
<th>Chair</th>
<th>What does research evidence say about peer review of teaching? The As, Bs, and Cs</th>
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<tr>
<td>Maja Flaig, University of Trier, Germany</td>
<td>Lily Min Zeng, The University of Hong Kong, Hong Kong</td>
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<td>Predictors of Faculty Occupational Well-being in Canadian Universities: A Survey Study</td>
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<td>Alenoush Saroyan, McGill University, Canada; Nathan Hall, McGill University, Canada; Zaynab Sabagh, McGill University, Canada</td>
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<td>Professional Development of Teacher Educators - Doubts and confusion while teaching my colleagues</td>
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<td>Naomi Weiner-Levy, Motet institute; david Yellin Academic College, Israel</td>
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<td>University Students &amp; Self-Regulated Learning: Knowledge versus Action</td>
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<td>Nora Maria Foerst, University of Vienna, Austria; Julia Klug, University of Vienna, Austria; Barbara Schober, Universität Wien, Austria; Christiane Spiel, University of Vienna, Austria</td>
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**ANNOTATIONS:**
The presentation by Naomi Weiner-Levy (Professional Development of Teacher Educators - Doubts and confusion while teaching my colleagues) is cancelled and replaced by Oddny Judith Solheim (Challenges in measuring growth in early reading development in two transparent orthographies).

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### SINGLE PAPER: EDUCATIONAL EFFECTIVENESS - C

<table>
<thead>
<tr>
<th>Chair</th>
<th>Differential teacher effectiveness on student engagement and learning attitudes</th>
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<tr>
<td>Terhi Mäntylä, University of Tampere, Finland</td>
<td>James Ko, The Education University of Hong Kong, Hong Kong; Pamela Sammons, University of Oxford, United Kingdom; Leonidas Kyriakides, University of Cyprus, Cyprus; Ridwan Maulana, GION - University of Groningen, Netherlands</td>
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<td>Language learning strategies of EFL learners and their effects on learning outcomes</td>
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<td>Katrin Saks, University of Tartu, Estonia; Åli Leijen, University of Tartu, Estonia</td>
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<td>Explaining differences in reading competencies and motivation by instructional and school factors</td>
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<td>Brigitte Steinert, German Institute for International Educational Research (DIPF), Germany; Jan Hochweber, University of Teacher Education St. Gallen, Switzerland; Eckhard Klieme, German Institute for International Educational Research (DIPF), Germany</td>
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<td>Compositional effects on achievement and social outcomes of SEN students in inclusive classes</td>
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<td>Katja Scharenberg, University of Education Freiburg, Germany; Wolfram Rollett, University of Education Freiburg, Germany; Wilfried Bos, Technical University of Dortmund, Germany</td>
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### SINGLE PAPER: HIGHER EDUCATION AND STUDENT LEARNING

**Chair**  
Emine Erktin, Bogazici University, Turkey

- **University students’ engagement construction in Finnish higher education**  
  Vesa Korhonen, University of Tampere, Finland; Markus Mattsson, University of Helsinki, Finland; Mikko Inkinen, Aalto University, Finland; Auli Toom, University of Helsinki, Finland

- **Psychological flexibility - a key to success in university studies?**  
  Telle Halilikari, University of Helsinki, Finland; Henna Asikainen, University of Helsinki, Finland

- **The impact of cognitive resources on students’ performance in mathematical proof construction**  
  Daniel Sommerhoff, Ludwig-Maximilians-Universität (LMU), Germany; Stefan Ufer, Ludwig-Maximilians-Universität (LMU), Germany; Ingo Kollar, University of Augsburg, Germany

- **Cooperative learning in higher education: Effects of fostering group work on students’ achievement**  
  Anika Bürgermeister, University of Leipzig, Germany; Henrik Saalbach, University of Leipzig, Germany; Robert Wilkens, University of Leipzig, Germany; Romy Schneider, University of Leipzig, Germany

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### SINGLE PAPER: HIGHER EDUCATION - L

**Chair**  
Marianna Vivitsou, University of Helsinki, Finland

- **Advancing Teaching and Learning Conceptions in Graduate Teaching Assistant Training**  
  Alex Shum, The University of Hong Kong, Hong Kong; Ada Lee, The University of Hong Kong, Hong Kong; Suki Ekaratne, University of Colombo, Sri Lanka

- **Variables Explaining Learners’ Emotions in Simulation-Based Learning Environments**  
  Tuulikki Keskitalo, University of Lapland, Finland; Heli Ruokamo, University of Lapland, Finland

- **Performance profiling in higher education: A visualisation tool to inform strategy formulation**  
  Marian Mahat, The University of Melbourne, Australia

- **Do college students spend more time studying when assignments are interesting?**  
  Martijn Meeter, VU University Amsterdam, Netherlands
THURSDAY, 31 AUGUST 2017

Session G: 19  |  Time: 08:30-10:00  |  Location: Pinni B - B3111

SINGLE PAPER: EDUCATIONAL EFFECTIVENESS AND INSTRUCTION

Chair
Pauliina Alenius, University of Tampere, Finland

A longitudinal study of reciprocal effects of participation and achievement in science classrooms
Benjamin Caspar Fauth, University of Tübingen, Germany; Jasmin Decristan, Goethe-University Frankfurt; IDEA-Research Center, Germany; Mareike Kunter, Goethe-Universität Frankfurt, Germany; Gerhard Buettnner, University of Frankfurt, Germany; Eckhard Klieme, German Institute for International Educational Research (DIPF), Germany; Ilona Hardy, Goethe-Universität Frankfurt, Germany; Csaba Kurucz, Goethe-University Frankfurt, Institute of Psychology, Germany; Eva Lena Heide, Goethe-University Frankfurt, Institute of Psychology, Germany; Franziska Locher, University of Bamberg, Germany; Bianka Troll, Leuphana University of Lüneburg, Germany

Using classroom videos and student surveys to measure teaching practice
Kirsti Klette, University of Oslo, Norway; Marte Blikstad-Balas, University of Oslo, Norway; Astrid Roe, University of Oslo, Norway

Teacher Practices, Student Participation, and Learning: Variation across Classroom Structures
Noreen Webb, University of California, Los Angeles, United States; Marsha Ing, University of California, Riverside, United States; Megan Franke, University of California, Los Angeles, United States; Joy Zimmerman, University of California, Los Angeles, United States; Nicholas Johnson, Orange County Department of Education, United States

Developing Stages of Tasks of Teaching Mathematics by Using a Content-Specific Instrument
Charalambos Charalambous, University of Cyprus, Cyprus; Marina Kenti, University of Cyprus, Cyprus; Evridiki Kasapi, University of Cyprus, Cyprus; Kassandra Georgiou Feivou, University of Cyprus, Cyprus; Sofia Agathangelou, University of Cyprus, Cyprus; Maria Papacharalambous, University of Cyprus, Cyprus

Session G: 20  |  Time: 08:30-10:00  |  Location: Virta - 109

SINGLE PAPER: LEARNING AND DEVELOPMENT IN EARLY CHILDHOOD - E

Chair
Minna Lakkala, University of Helsinki, Finland

Enhancing physical active play in Norwegian Kindergartens – a randomised evaluative controlled trial
Thomas Moser, University College of Southeast Norway, Norway; Steinar Øverås, University College of Southeast Norway, Norway; Eivind Andersen, University College of Southeast Norway, Norway; Janne Borch-Jensen, Sandefjord municipality, Health services, Norway; Hanna Ellingsen, Sandefjord municipality, health services, Norway; Kari Anne Jørgensen, University College of Southeast Norway, Norway; Linda Nilsen, Sandefjord municipality, education and upbringing, Norway; Grethe Skalleberg, Sandefjord municipality, education and upbringing, Norway

Narrativity and Narratives in a Musical Playschool Teacher’s Pedagogy
Kyllikki Rantala, University of Tampere, Finland

A Pre-Literacy Intervention Study in a Multilingual Setting
Cyril Wealer, University of Luxembourg, Luxembourg; Silke Fricke, University of Sheffield, United Kingdom; Pascale Engel de Abreu, University of Luxembourg, Luxembourg

Enhancing Physical Activity in Taiwanese Early Childhood Education and Care
Jyrki Reunamo, University of Helsinki, Finland; Li-Chen Wang, Chang Gung University of Science and Technology, Taiwan; Hui-Chun Lee, Tzu Chi University, Taiwan
### Session G: 21
**Time:** 08:30-10:00  
**Location:** Main Building E - E350

**SINGLE PAPER: SPECIAL EDUCATIONAL NEEDS - C**

<table>
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<tr>
<th>Chair</th>
<th>Title and Abstract</th>
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| Tahsin Oğuz Başokçu, Turkey | **SEN students, self and teacher perceptions of school performance: Relation with classroom ecology**  
Joana Pipa, University of Lisbon, Portugal; Fátima Silva, Agrupamento de Escolas Dr. Azevedo Neves, Portugal; Sofia Freire, Instituto de Educação da Universidade de Lisboa, Portugal; Cecília Aguiar, ISCTE-Instituto Universitário de Lisboa, Portugal; Francisco Vaz da Silva, Escola Superior de Educação de Lisboa, Portugal; Maria João Mogarroz, Instituto de Educação da Universidade de Lisboa, Portugal; Aurízia Anica, Escola Superior de Educação e Comunicação – Universidade do Algarve, Portugal |
| | **Exposure to multimedia features in e-book for promoting literacy among students with ADHD**  
Ravit Grumberg Vardi, Bar-Ilan University, Israel; Adina Shamir, Bar-Ilan University, Israel |
| | **Valid test scores of problem-solving competence and their use for final exams in vocational education**  
Felix Walker, Technical University of Kaiserslautern, Germany; Leo van Waveren, Technical University of Kaiserslautern, Germany |
| | **Enhancing pro-social ability among HFASD children with computer mediated intervention**  
Sigal Eden, Bar-Ilan University, Israel; Atara Oren, Bar-Ilan University, Israel |

### Session G: 22
**Time:** 08:30-10:00  
**Location:** Pinni B - B3109

**SINGLE PAPER: EDUCATIONAL EVALUATION, ACCOUNTABILITY AND SCHOOL IMPROVEMENT - B**

<table>
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<tr>
<th>Chair</th>
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| Margus Pedaste, University of Tartu, Estonia | **Bayesian statistics in educational research – A look at the current state of affairs**  
Christoph Koenig, Friedrich Schiller University Jena, Germany; Rens van de Schoot, Utrecht University, Netherlands |
| | **Explaining halo effects in students’ evaluation of teaching quality**  
Sebastian Röhl, University of Education Freiburg, Germany; Wolfram Rollett, University of Education Freiburg, Germany |
| | **Assessments and Accountability in Secondary Education: International Trends in Educational Policies**  
Janna Teltemann, University of Hildesheim, Germany; Nina Jude, German Institute for International Educational Research (DIPF), Germany |
| | **Individual and school-related factors which determine academic performance among at-risk students**  
Dóra Fanni Szabó, University of Szeged, Hungary |
### SINGLE PAPER: LEARNING AND TEACHING IN CULTURALLY DIVERSE SETTINGS - C

**Chair**
Roula Anastasakos, Toronto District School Board, Canada

**Encouraging participation in cross-cultural group work: An RCT of local vs internationalised content**
Jenna Mittelmeier, Open University, United Kingdom; Garron Hillaire, The Open University, United Kingdom; Bart Rientjes, Open University, United Kingdom; Dirk Tempelaar, Maastricht University, Netherlands; Denise Whitelock, Open University, United Kingdom

**Dutch teachers on citizenship education in relation to their student composition**
Isil Sincer, Erasmus University Rotterdam, Netherlands; Sabine Severiens, Erasmus University Rotterdam, Netherlands; Monique Volman, University of Amsterdam, Netherlands

**The Validation and Exploration of the Chinese Culturally Responsive Teaching Self-efficacy Scale**
Wai Ming Cheung, The University of Hong Kong, Hong Kong; Yanli Huang, The University of Hong Kong, Hong Kong; Wing Yee W.Y. WONG, The University of Hong Kong, China; Hector W. H. Tsang, The Hong Kong Polytechnic University, Hong Kong

**Examining tensions between achievement-oriented behaviour and cultural identity.**
Emma Carter, University of Cambridge, United Kingdom

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### SINGLE PAPER: SOCIAL INTERACTION IN LEARNING AND INSTRUCTION - F

**Chair**
Britt Adams, Ghent University, Belgium

**Gender differences in math: The role of psychological variables and teacher-student interactions**
Ana María Espinoza Catalán, Pontificia Universidad Católica de Chile, Chile; Sandy Taut, School of Psychology, Measurement Center MIDE UC, Pontificia Universidad Católica de Chile, Chile

**The gains of teachers’ interaction skills training? An international comparison**
Markus Talvio, University of Helsinki, Finland; Minna Berg, University of Helsinki, Finland; Lauri Hietajärvi, University of Helsinki, Finland; Kirsti Lonka, University of Helsinki, Finland

**The sociomaterial configurations of students’ creative agency in school-based makerspaces**
Kristiina Kumpulainen, University of Helsinki, Finland; Antti Rajala, University of Helsinki, Finland; Anna Mikkola, University of Helsinki, Finland; Sinikka Kaartinan, University of Jyväskylä, Finland

**Educational researchers and teacher educators: Learning to collaborate across boundaries**
Aleksandar Bucal, University of Belgrade, Serbia; Francesco Arcidiacono, University of Teacher Education (HEP-BEJUNE), Switzerland; Ali Leijien, University of Tartu, Estonia; Nevena Budjevac, University of Belgrade, Serbia
### INVITED SYMPOSIUM: CONTEXTUAL INFLUENCES ON TEACHERS’ CAREER CHOICE AND DEVELOPMENT IN THE PROFESSION

<table>
<thead>
<tr>
<th>Chair</th>
<th>Contextual Influences on Beginning Teachers’ Career Motivations and Career Choice Satisfaction</th>
</tr>
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<tbody>
<tr>
<td>Paul Richardson, Monash University, Australia</td>
<td>Paul Richardson, Monash University, Australia; Helen Watt, Monash University, Australia</td>
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</table>

**Factors influencing early career teachers’ professional plans: a longitudinal study in Austria**

Johannes König, University of Cologne, Germany; Martin Rothland, University of Siegen, Germany; Stefan Klemenz, University of Cologne, Germany; Sarantis Tacht sogliou, University of Cologne, Greece

**Identity development in Swiss vocational education and training teachers**

Zoe Morris, Monash University, Australia; Jean-Louis Berger, Swiss Federal Institute for Vocational Education and Training (SFIVET), Switzerland

**Context influences on teachers’ motivation, self-efficacy & burnout: Do schools & principals matter?**

Ruth Butler, Hebrew University of Jerusalem, Israel; Limor Shibaz, The Hebrew University of Jerusalem, Israel

### INVITED SYMPOSIUM: NEW MEASUREMENTS OF PROFESSIONAL LEARNING: ON THE EXPLANATORY POWER OF NEW DATA COLLECTION METHODS

<table>
<thead>
<tr>
<th>Chair</th>
<th>Sociometric badges and WiFi sensors: using wearable sensors to study dynamics of social learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hans Gruber, University of Regensburg, Germany</td>
<td>Maaike Enderdijk, University of Twente, Netherlands; Plet Van den Bossche, University of Antwerp, Belgium</td>
</tr>
</tbody>
</table>

**Developing methods for understanding the Role of Emotions in Agentic Learning at work (REAL)**

Anneli Eteläpelto, University of Jyväskylä, Finland; Päivi Hökkä, University of Jyväskylä, Finland; Susanna Paloniemi, University of Jyväskylä, Finland; Katja Vähäsantanen, University of Jyväskylä, Finland

**How can neuroscience and education move forward together? Myths and opportunities**

Nienke van Atteveldt, VU University Amsterdam, Netherlands

**Error detection beforehand? Eye-tracking and face recognition for analyzing learning from errors**

Christoph Fischer, University of Paderborn, Germany; Torben Tönniges, University of Bielefeld, Germany; Birgitta Wrede, Bielefeld University, Germany; Christian Hartes, University of Paderborn, Germany
INVITED SYMPOSIUM: HIGHER EDUCATION TEACHERS AND TEACHING

Chair
Liisa Postareff, University of Helsinki, Finland

Organisers
Liisa Postareff, University of Helsinki, Finland; Robert Kordts-Freudinger, Paderborn University, Germany; Rike Bron, University of Twente, Netherlands

Discussant
Simon Barrie, Western Sydney University, Australia

Innovating pedagogical designs for student-centered learning: teachers’ approaches and challenges
Crina Damsa, University of Oslo, Norway; Rachelle Esterhazy, University of Oslo, Norway; Monika Nerland, University of Oslo, Norway; Heidi Hytinen, University of Helsinki, Finland; Sari Lindblom, University of Helsinki, Finland

Pedagogical training, use of engaging teaching methods and conceptions of scientific thinking
Mari Murtonen, University of Turku, Finland; Heidi Salmanto, University of Turku, Finland

Mid-Career Faculty: Trends, Barriers, and Possibilities
Anita Welch, Ball State University, United States; Daniel Reardon, Missouri University of Science and Technology, United States; Jocelyn Bolin, Ball State University, United States; Rachel Stenger, Ball State University, United States

Student’s experiences of small-group teaching: ‘Meeting of minds’ in reaching personal understanding
Noel Entwistle, University of Edinburgh, United Kingdom; Evangelia Karagiannopoulou, University of Ioannina, Greece

ANNOTATIONS:
THE PRESENTATION BY NOEL ENTWISTLE (STUDENT’S EXPERIENCES OF SMALL-GROUP TEACHING: ‘MEETING OF MINDS’ IN REACHING PERSONAL UNDERSTANDING) IS CANCELLED.

SYMPOSIUM: INFORMAL LEARNING IN MUSEUMS AND EXHIBITIONS

Chair
Doris Lewalter, Germany

Discussant
Susan Nolen, University of Washington, United States

The impact of visitor profiles on the processing of conflicting information
Doris Lewalter, Technical University of Munich (TUM), Germany; Stephanie Moser, Technical University of Munich, Germany; Sielle Phelan, TUM, Germany; Wolfgang Schnottz, University of Koblenz-Landau, Germany

Comparing visit motivation across educational leisure settings with a new short-scale
Doris Lewalter, Technical University of Munich (TUM), Germany; Sielle Phelan, TUM, Germany; Johannes Bauer, University of Erfurt, Germany

Using multimedia guides to foster comprehension of pictorial artworks in museums
Stephan Schwan, Leibniz-Institut für Wissensmedien, Germany; Silke Dutz, Leibniz Institut für Wissensmedien, Germany

Teachers’ Perspectives on the Role of Digital Media for School Class Visits to Science Museums
Carmen Zahn, University of Applied Sciences Northwestern Switzerland, Switzerland; Beat Vollenwyder, Fachhochschule Nordschweiz, Switzerland
### SYMPOSIUM: TEMPORAL AND ADAPTIVE PROCESS OF REGULATED LEARNING – WHAT CAN MULTIMODAL DATA TELL?

**Chairs**  
Sanna Järvelä, University of Oulu, Finland;  
Maria Bannert, Germany  

**Discussant**  
Allyson Hadwin, University of Victoria, Canada

**Analysing Temporal Data for Understanding and Fostering Learning induced by Self-Created Prompts**  
Maria Bannert, Technical University of Munich (TUM), Germany; Katharine Engelmann, Technical University of Munich, Germany

**Examining the interplay of affect and self regulation in the context of clinical reasoning**  
Susanne Lajoie, McGill University, Canada; Maren Gube, McGill University, Canada; Amanda Jarrell, McGill University, Canada; Shan Li, McGill University, Canada; Juan Zheng, McGill University, Canada

**Measuring, Analyzing, Inferring Temporally Unfolding Self-Regulatory Processes from Multimodal Data**  
Roger Azevedo, North Carolina State University, United States; Michelle Taub, North Carolina State University, United States; Nicholas V. Mudric, North Carolina State University, United States; Garrett C Millar, North Carolina State University, United States; Amanda E. Bradbury, North Carolina State University, United States; Megan J. Price, North Carolina State University, United States

**How regulation evolves during collaborative learning? – triangulation of multimodal dataset**  
Sanna Järvelä, University of Oulu, Finland; Jonna Malmberg, University of Oulu, Finland; Mártá Sobociński, University of Oulu, Finland; Eetu Haataja, University of Oulu, Finland; Paul A. Kirschner, Open University of the Netherlands, Netherlands

### SYMPOSIUM: RESEARCHING PROFESSIONAL LEARNING IN CHANGING EPISTEMIC ENVIRONMENTS

**Chair**  
Monika Nerland, University of Oslo, Norway

**Discussant**  
Madeleine Abrandt Dahlgren, Linköping University, Sweden

**Insights into the dynamics between changes in professional fields and teaching in higher education**  
Lina Markauskaite, University of Sydney, Australia; Peter Goodyear, The University of Sydney, Australia

**Students’ and beginning professionals’ learning with web-based resources in software engineering**  
Monika Nerland, University of Oslo, Norway; Crina Damas, University of Oslo, Norway

**Knowledge translation, professional communication and learning in the context of chronic illness**  
Asa Makitalo, University of Gothenburg, Sweden; Mona Lundin, University of Gothenburg, Sweden

**Epistemic shifts in teachers’ work and learning analyzed through three research projects**  
Karen Jensen, University of Oslo, Norway; Eli Tronsmo, University of Oslo, Norway
### SYMPOSIUM: PROFESSIONAL DEVELOPMENT IN DIALOGIC TEACHING: COMMONALITIES AND CONSTRAINTS

<table>
<thead>
<tr>
<th>Chair</th>
<th>Using Talk to Promote Argument Literacy: Effects of Professional Development in the Language Arts</th>
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<tbody>
<tr>
<td>Alexander Groeschner, Germany</td>
<td>Ian A.G. Wilkinson, The Ohio State University, United States; Alina Reznitskaya, Montclair State University, United States; Min-Young Kim, The Ohio State University, United States; Ariel Sykes, Montclair State University, United States</td>
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<tr>
<th>Organiser</th>
<th>Professional Development For Dialogic Teaching</th>
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<tr>
<td>Alina Reznitskaya, Montclair State University, United States</td>
<td>Robin Alexander, University of Cambridge, United Kingdom</td>
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<tr>
<th>Discussant</th>
<th>Effects of Professional Development in Dialogic Teaching on Teacher and Student Self-efficacy</th>
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<tr>
<td>Jonathan Osborne, Stanford University, United States</td>
<td>Alexander Groeschner, Friedrich Schiller University Jena, Germany; Ann-Kathrin Schindler, Technische Universität München (TUM), Germany; Doris Holzberger, Technical University of Munich (TUM), Germany; Tina Seidel, Technische Universität München (TUM), Germany</td>
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<th>Developing Dialogic Pedagogy, Supporting Teacher Agency</th>
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<td>Alexander Groeschner, Friedrich Schiller University Jena, Germany</td>
<td>Robin Alexander, University of Cambridge, United Kingdom</td>
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### SYMPOSIUM: CONTEXT EFFECTS IN LEARNING AND INSTRUCTION

<table>
<thead>
<tr>
<th>Chair</th>
<th>Changing language mindsets influences beliefs towards and feedback given to language learners</th>
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<tr>
<td>Mona Weinhuber, University of Freiburg, Germany</td>
<td>Nigel Mantou Lou, University of Alberta, Canada; Kimberly Noels, University of Alberta, Canada</td>
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<tr>
<th>Discussant</th>
<th>How context influences pre-service teachers attending and responding to student ideas</th>
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<tr>
<td>Fritz C. Staub, University of Zurich, Switzerland</td>
<td>Leema Berland, University of Wisconsin-Madison, United States</td>
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<th>Chair</th>
<th>When learning becomes traveling. How metaphors of learning change when entering university</th>
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<tr>
<td>Matthias Nückles, University of Freiburg, Germany</td>
<td>Elisabeth Wegner, University of Freiburg, Germany</td>
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<th>Discussant</th>
<th>Context affects teachers’ principle-orientation of explanations</th>
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<td>Fritz C. Staub, University of Zurich, Switzerland</td>
<td>Mona Weinhuber, University of Freiburg, Germany; Andreas Lachner, University of Tübingen, Germany; Timo Leuders, University of Education Freiburg, Germany; Matthias Nückles, University of Freiburg, Germany</td>
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### SYMPOSIUM: IMPLEMENTING SDT IN PRACTICE: IMPROVING NEED-SUPPORTIVE TEACHING THROUGH SCHOOL-BASED INTERVENTIONS

**Chair**  
Lisette Hornstra, Utrecht University, Netherlands  
**Discussant**  
Idit Katz, Ben-Gurion University of the Negev, Israel

**Motivating primary school students with diverse backgrounds: Effects of a teacher training**  
Desirée Weijers, Kohnstamm Institute, University of Amsterdam, Netherlands; Lisette Hornstra, Utrecht University, Netherlands; Ineke van der veen, Kohnstamm Institute, University of Amsterdam, Netherlands; Thea Peetsma, University of Amsterdam, Netherlands

**How to train teachers to deliver a multi-level SDT-based intervention to promote youth activity**  
Katarina Köykä, University of Helsinki, Finland; Elisa Kaaja, University of Helsinki, Finland; Katarina Koykka, University of Helsinki, Finland; Martin Hagger, Curtin University, Australia; Taru Lintunen, University of Jyväskylä, Finland; Nelli Hankonen, University of Tampere, Finland

**Training teachers to assess in a more motivating way – the effects on teacher and student outcomes**  
Christa Krijgsman, Ghent University, Belgium; Jolien Maes, Ghent University, Belgium; Nathalie Aelterman, Ghent University, Belgium; An de Meester, Ghent University, Belgium; Isabel Tallir, Ghent University, Belgium; Jan van Tartwijk, Utrecht University, Netherlands; Greet Cardon, Ghent University, Belgium; Maarten Vansteenkiste, Ghent University, Belgium; Leen Haerens, Ghent University, Belgium

**Supporting students’ need for autonomy and structure: An intervention study in secondary school**  
Lisette Hornstra, Utrecht University, Netherlands; Desirée Weijers, Kohnstamm Institute, University of Amsterdam, Netherlands; Ineke van der veen, Kohnstamm Institute, University of Amsterdam, Netherlands; Thea Peetsma, University of Amsterdam, Netherlands

### SYMPOSIUM: BRIDGING DISCOURSE IN EDUCATIONAL RESEARCH THROUGH EXAMINING THE NOTIONS OF STABILITY AND CHANGE

**Chair**  
Man Ching Esther Chan, The University of Melbourne, Australia  
**Organiser**  
Man Ching Esther Chan, The University of Melbourne, Australia  
**Discussant**  
Richard Lehrer, Vanderbilt University, United States

**Examining Different Research Perspectives through Interviews with Researchers: A Dialectic Approach**  
Man Ching Esther Chan, The University of Melbourne, Australia

**Measuring Change in ICT Literacy Over Time**  
John Ainley, Australian Council for Educational Research, Australia; Julian M. S. Fraillon, ACER, Australia; Wolfram Harald Schulz Teuteberg, Australian Council for Educational Research, Australia; Eveline Gebhardt, Australian Council for Educational Research, Australia

**Epistemic Topicalizations as Resources for Cohesion and Change in Classroom Learning Trajectories**  
Fritjof Sahlström, Åbo Akademi University, Finland; Marie Tanner, Karlstad University, Sweden

**Only the Ephemeral is of Lasting Value – Interrogating the Tension between Stability and Variation**  
David Clarke, The University of Melbourne, Australia
### SYMPOSIUM: STUDENTS’, PEERS’, AND TEACHERS’ MONITORING AND REGULATION:
EFFECTS OF COGNITION AND MOTIVATION

**Chairs**  
Mariette van Loon, University of Bern, Switzerland; Martine Baars, Erasmus University Rotterdam, Netherlands

**Discussant**  
Daniel Dinsmore, University of North Florida, United States

<table>
<thead>
<tr>
<th>Title</th>
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<tbody>
<tr>
<td>The Effect of Cue-Availability on Teachers’ and Students’ Judgment Accuracy</td>
<td>Janneke van de Pol, Utrecht University, Netherlands; Anique de Bruin, Maastricht University, Netherlands; Mariette van Loon, University of Bern, Switzerland; Tamara Van Gog, Utrecht University, Netherlands</td>
</tr>
<tr>
<td>Elementary School Children’s Self- and Peer Scoring of Test Responses Using Feedback</td>
<td>Mariette van Loon, University of Bern, Switzerland; Claudia Roebers, University of Bern, Switzerland</td>
</tr>
<tr>
<td>The Influence of Affect and Motivation on SRL When Learning to Solve Problems in Secondary Education</td>
<td>Martine Baars, Erasmus University Rotterdam, Netherlands; Lisette Wijnia, Erasmus University Rotterdam &amp; University College Roosevelt, Netherlands; Fred Paas, Erasmus University Rotterdam/University of Wollongong, Netherlands</td>
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<tr>
<td>Measuring Middle School Students’ Metacognitive Monitoring during Science Learning with SimSelf</td>
<td>Michelle Taub, North Carolina State University, United States; Nicholas Mudrick, North Carolina State University, United States; Roger Azevedo, North Carolina State University, United States</td>
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### SYMPOSIUM: THE DEVELOPMENT OF ACHIEVEMENT MOTIVATION DURING SCHOOL YEARS

**Chair**  
Jaana Viljaranta, University of Eastern Finland, Finland

**Organisers**  
Kati Vasalampi, University of Jyväskylä, Finland; Jaana Viljaranta, University of Eastern Finland, Finland

**Discussant**  
Anna-Maija Poikkeus, University of Jyväskylä, Finland

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<tbody>
<tr>
<td>Signs of changes in students’ school motivation and well-being?</td>
<td>Minna Torppa, University of Jyväskylä, Finland; Kati Vasalampi, University of Jyväskylä, Finland; Kenneth Eklund, University of Jyväskylä, Finland; Marja-Kristiina Lerkkanen, University of Jyväskylä, Finland</td>
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<tr>
<td>Patterns of Word Reading Skill, Interest, and Self-Concept of Ability</td>
<td>Jaana Viljaranta, University of Eastern Finland, Finland; Noona Kiuru, University of Jyväskylä, Finland; Marja-Kristiina Lerkkanen, University of Jyväskylä, Finland; Giuntutas Silinskas, University of Jyväskylä, Finland; Anna-Maija Poikkeus, University of Jyväskylä, Finland; Jari-Erik Nurmi, University of Jyväskylä, Finland</td>
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<tr>
<td>Motivation and well-being at Grade 9 and underlying development of self-concept and interest in math</td>
<td>Anna-Lisa Jõgi, Tallinn University, Estonia; Eve Kikas, Tallinn University, Estonia</td>
</tr>
<tr>
<td>Student-perceived teacher behaviors and motivational profiles in mathematics:</td>
<td>Charlott Rubach, University of Potsdam, Germany; Rebecca Lazarides, University of Potsdam, Germany; Julia Dietrich, Friedrich Schiller University of Jena, Germany; Päivi H. Taskinen, Friedrich Schiller University Jena, Finland</td>
</tr>
</tbody>
</table>
## SYMPOSIUM: THE NEUROSCIENCE OF LEARNING: IMPLICATIONS FOR EDUCATION

**Chair**
Jérôme Prado, France

**Discussant**
Roland H. Grabner, University of Graz, Austria

**Effort versus trait praise differentially influences negative feedback processing in adolescents**
Nienke van Atteveldt, VU University Amsterdam, Netherlands; Nikki Lee, VU University Amsterdam, Netherlands; Miriam Hollarek, VU University Amsterdam, Netherlands; Lydia Krabbendam, VU University Amsterdam, Netherlands

**A neural dissociation between deductive and probabilistic reasoning in children**
Jérôme Prado, Centre National de la Recherche Scientifique (CNRS), France

**Strategy over operation: Neural activation in fact retrieval and procedural strategy use in children**
Brecht Polspoel, KU Leuven, Belgium; Lien Peters, KU Leuven - University of Leuven, Belgium; Bert De Smedt, KU Leuven - University of Leuven, Belgium

**The neuroscience of learning: issues in modeling cognition and learning contexts**
Julien Mercier, University of Quebec (Montreal), Canada; Pierre Chalfoun, User Research Lab – Ubisoft Montreal, Canada; Kamran Shaikh, University of Quebec in Montreal, Canada; Babak Khosravifar, University of Quebec in Montreal, Canada

## SYMPOSIUM: THE EVOLUTION OF PCK OF HISTORY TEACHERS.

**Chair**
Gerhard Stoel, RICDE / University of Amsterdam, Netherlands

**Discussant**
Jannet van Drie, University of Amsterdam, Netherlands

**What makes a history teacher? An empirical review of PCK in History.**
Hanneke Tuijthof, Utrecht University, Netherlands; Albert Logtenberg, Leiden University, Netherlands

**Test-Development for a standardized instrument to measure PCK of future history teachers**
Nicola Brauch, University of Bochum, Germany; Joana Seiffert, Ruhr-University Bochum, Germany; Andreas Seiffert, University of Paderborn, Germany; Martin Rothland, Siegen University, Germany; Joergen Wolf, Ruhr-University Bochum, Germany

**Developing student history teachers’ PCK: an introductory training on inquiry-based learning**
Michiel Voet, Ghent University, Belgium; Bram De Wever, Ghent University, Belgium

**The homogeneity of Dutch experienced history teachers’ PCK in a curriculum innovation**
Hanneke Tuijthof, Utrecht University, Netherlands; Larike Bronkhorst, Utrecht University, Netherlands; Jan van Tartwijk, Utrecht University, Netherlands; Leen Dorsman, Utrecht University, Netherlands
**Session H: 12**  
**Time:** 10:15-11:45  
**Location:** Pinni B - B4116

**SYMPOSIUM: HOW AM I DOING? IMPROVING STUDENTS’ SELF-ASSESSMENTS**

**Chair**  
Marloes Nederhand, Erasmus University Rotterdam, Netherlands

**Discussant**  
Antje de Bruin, Maastricht University, Netherlands

**Providing Feedback on Self-Assessments: Effects on Subsequent Self-Assessment and Task Selection**  
Steven Raaijmakers, Utrecht University, Netherlands; Martine Baars, Erasmus University Rotterdam, Netherlands; Fred Paas, Erasmus University Rotterdam/University of Wollongong, Netherlands; Jeroen Van Merrienboer, Maastricht University, Netherlands; Tamara Van Gog, Utrecht University, Netherlands

**Providing Standards both with and without Idea-Units to improve Calibration Accuracy**  
Marloes Nederhand, Erasmus University Rotterdam, Netherlands; Huib Tabbers, Erasmus University Rotterdam, Netherlands; Remigius (Remy) Rikers, UCR / Utrecht University, Netherlands

**Effects of Informing Fifth Graders About the Dangers of Making Overconfident Judgments of Learning**  
Julian Roelle, Bielefeld University, Germany; Kirsten Berthold, University of Bielefeld, Germany

**The Calibration Process Among Proficient and Low Calibrators: A Qualitative Approach**  
Antonio Gutierrez de Blume, Georgia Southern University, United States; Pamela Wells, Georgia Southern University, United States; Jason Parker, Georgia Southern University, United States

**Session H: 13**  
**Time:** 10:15-11:45  
**Location:** Main Building C - C7

**SYMPOSIUM: CURRICULUM, PEDAGOGY, AND CLASSROOM QUALITY: PROMOTING EFFECTIVENESS OF EARLY CHILDHOOD EDUCATION**

**Chair**  
Kathy Sylva, University of Oxford, United Kingdom

**Discussant**  
Antje von Suchodoletz, New York University Abu Dhabi, United Arab Emirates

**Towards a new ECE curriculum for Europe: findings from the CARE research project**  
Kathy Sylva, University of Oxford, United Kingdom; Katharina Ereky-Stevens, University of Oxford, United Kingdom; Martine Broekhuizen, Utrecht University, Netherlands

**Complex relations between structural characteristics and process quality in ECEC across Europe**  
Pauline Slot, Utrecht University, Netherlands; Marja-Kristiina Lerkanen, University of Jyväskylä, Finland; Paul Leseman, Utrecht University, Netherlands

**How does process quality vary according to the classroom activities? A multiple case study**  
Joana Cadima, University of Porto, Portugal; Jenni Salminen, University of Jyväskylä, Finland; Pauline Slot, Utrecht University, Netherlands; Marja-Kristiina Lerkanen, University of Jyväskylä, Finland

**Educational dialogues in toddler classrooms**  
Helena Rasku-Puttonen, University of Jyväskylä, Finland; Jenni Salminen, University of Jyväskylä, Finland; Heli Muhonen, University of Jyväskylä, Finland; Marja-Kristiina Lerkanen, University of Jyväskylä, Finland

**ANNOTATIONS:**  
**IMPORTANT NOTICE:** THIS SESSION WILL TAKE PLACE IN ROOM MAIN BUILDING A - A05.
### SYMPOSIUM: NEW RESEARCH PERSPECTIVES ON INTEREST DEVELOPMENT IN SCIENCE EDUCATION

**Chair**
Kimberley Pressick-Kilborn, University of Technology Sydney, Australia

**Discussant**
K. Ann Renninger, Swarthmore College, United States

**A teacher’s growing interest in science: Developing alongside Kindergarten students**
Kimberley Pressick-Kilborn, University of Technology Sydney, Australia

**Development of Secondary school students’ interest and academic emotions over science lessons**
Kalle Juut, University of Helsinki, Finland; Jukka Marjanen, University of Helsinki, Finland; Jari Lavonen, University of Helsinki, Finland; Katarina Salmela-Aro, Helsinki Collegium for Advanced Studies, Finland; Barbara Schneider, Michigan State University, United States; Joseph Krajcik, Michigan State University, United States; Christopher Klager, Michigan State University, United States

**Students’ perceptions of time in learning tasks supporting or lacking interest development**
Morten Rask Petersen, University of Southern Denmark, Denmark

**Psychological perspectives on ‘negative’ interest development in science education**
Niels Dohn, Aarhus University, Denmark; Nikolaj Frydensbjerg Elf, University of Southern Denmark, Denmark

### SYMPOSIUM: TEACHERS’ ADAPTATION TO PROFESSIONAL CHALLENGES AND CHANGES IN VOCATIONAL EDUCATION AND TRAINING

**Chair**
Viviana Sappa, Swiss Federal Institute for Vocational Education and Training, Switzerland

**Organisers**
Viviana Sappa, Swiss Federal Institute for Vocational Education and Training, Switzerland; Carmela Aprea, Friedrich Schiller University Jena, Germany

**Discussant**
Susan Beltman, Curtin University, Australia

**Resilient teachers in vocational education and training (VET): a Swiss study.**
Carmela Aprea, Friedrich Schiller University Jena, Germany; Viviana Sappa, Swiss Federal Institute for Vocational Education and Training, Switzerland; Elena Boldrini, Swiss Federal Institute for Vocational Education and Training, Switzerland

**Vocational teachers’ professional agency in the stream of change**
Katja Vähäsantanen, University of Jyväskylä, Finland

**Vocational school novice teachers’ perceptions of school climate and self-efficacy**
Eve Eisenschmidt, Tallinn University, Estonia; Merilyn Meristo, Tallinn University, Estonia

**What support vocational teachers’ work engagement? Explorative study among Swiss VET teachers**
Viviana Sappa, Swiss Federal Institute for Vocational Education and Training, Switzerland; Elena Boldrini, Swiss Federal Institute for Vocational Education and Training, Switzerland
### Session H: 16
**Time:** 10:15-11:45  
**Location:** Main Building C - C5

**SYMPOSIUM: UNDERSTANDING AND STIMULATING CHILDREN’S DIGITAL READING**

**Chair**  
Ladisio Salmeron, University of Valencia, Spain

**Organiser**  
Eliane Segers, Radboud University Nijmegen / University of Twente, Netherlands

**Discussant**  
Jean-Francois Rouet, University of Poitiers, France

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet search result viewing in sixth grade students with and without learning difficulties</td>
<td>Jarkko Hautala, University of Jyväskylä, Finland; Otto Loborg, University of Jyväskylä, Finland; Carita Kiili, University of Oslo, Norway; Paavo Leppänen, University of Jyväskylä, Finland</td>
</tr>
<tr>
<td>The effects of different types of online feedback on reading comprehension of highschool children</td>
<td>Tami Katzir, University of Haifa, Israel; Einaat Tesler, University of Haifa, Faculty of Education, Israel; Michal Shany, University of Haifa, Israel</td>
</tr>
<tr>
<td>Strategy training and mind-mapping facilitates children’s digital text comprehension</td>
<td>Eliane Segers, Radboud University Nijmegen / University of Twente, Netherlands; Sabine Fesel, Radboud University, Netherlands; Linda de Leeuw, Radboud University, Netherlands; Ludo Verhoeven, Radboud University Nijmegen, Netherlands</td>
</tr>
<tr>
<td>Learning to construct navigable concept maps with eye-movement modelling examples</td>
<td>Ladisio Salmeron, University of Valencia, Spain; García Victoria, University of Valencia, Spain; Franck Amadieu, University of Toulouse, France</td>
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</tbody>
</table>

**ANNOTATIONS:**  
The presentation by Tami Katzir (The effects of different types of online feedback on reading comprehension of highschool children) is cancelled.

### Session H: 17
**Time:** 10:15-11:45  
**Location:** Pinni B - B3107

**SYMPOSIUM: LEARNING TO LEARN IN ITALY AND IN LATIN AMERICA**

**Chair**  
Sirkku Kupiainen, University of Helsinki, Finland

**Organiser**  
Cristina Stringher, Istituto Nazionale per la Valutazione del Sistema Educativo di Istruzione e di Formazione (INVALSI), Italy

**Discussant**  
Amparo Moreno, Universidad Autonoma de Madrid, Spain

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td>Learning to learn in Italy and in Latin America: a systematic literature review</td>
<td>Cristina Stringher, Istituto Nazionale per la Valutazione del Sistema Educativo di Istruzione e di Formazione (INVALSI), Italy</td>
</tr>
<tr>
<td>Learning to learn in Mexico</td>
<td>Hugo Armando Brito Rivera, Metropolitan Autonomous University, Mexico</td>
</tr>
<tr>
<td>Learn how to learn in Brazilian intellectual production</td>
<td>Claudia L. F. Davis, Fundação Carlos Chagas / PUC-SP, Brazil</td>
</tr>
<tr>
<td>Components of learning to learn in Italy and in Latin American countries</td>
<td>Paolo Di Rienzo, University Roma Tre, Italy; Estefania García González, University of Valladolid/University of Roma Tre, Spain</td>
</tr>
</tbody>
</table>
### SYMPOSIUM: ADVANCES IN THE ASSESSMENT OF SCIENTIFIC REASONING AND ARGUMENTATION ACROSS DISCIPLINES

**Chair**
Ingo Kollar, University of Augsburg, Germany

**Discussant**
André Tricot, University of Toulouse, France

**Productive argumentation for conceptual change learning**
Christa Asterhan, Hebrew University of Jerusalem, Israel

**Conceptualizing content-related and formal quality aspects of mathematical argumentation and proof**
Sarah Ottinger, Ludwig-Maximilians-Universität (LMU), Germany; Stefan Ufer, Ludwig-Maximilians-Universität (LMU), Germany; Ingo Kollar, University of Augsburg, Germany; Freydis Vogel, Technical University of Munich (TUM), Germany; Matthias Schwaghofer, Ludwig-Maximilians-Universität (LMU), Germany; Ilka Terwedow, Ludwig-Maximilians-Universität (LMU), Germany; Anselm Strohmaier, Technische Universität München, TUM School of Education, Germany; Kristina Reiss, Technische Universität München (TUM), Germany; Frank Fischer, Ludwig-Maximilians-Universität (LMU), Germany

**Differential item functioning and bifactor model analyses in evaluating scientific reasoning tests**
Ansgar Opitz, Ludwig-Maximilians-Universität (LMU), Germany; Moritz Heene, Ludwig-Maximilians-Universität (LMU), Germany; Frank Fischer, Ludwig-Maximilians-Universität (LMU), Germany

**Teacher reasoning about collaborative learning: the role of learning analytics**
Anouschka van Leeuwen, Utrecht University, Netherlands; Jeroen Janssen, Utrecht University, Netherlands; Gijsbert Erkens, Utrecht University, Netherlands; Mieke Brekelmans, Utrecht University, Netherlands; Ingo Kollar, University of Augsburg, Germany

### SYMPOSIUM: MEASURING AND SUPPORTING COLLABORATIVE LEARNERS’ ENGAGEMENT IN SHARED REGULATION PROCESSES

**Chair**
Hilde Van Keer, Ghent University, Belgium

**Discussant**
Deborah Pino-Pasternak, Murdoch University, Australia

**Metacognitive regulation during collaborative learning: does sharing always imply quality?**
Liesje De Backer, Ghent University, Belgium; Hilde Van Keer, Ghent University, Belgium; Martin Valcke, Ghent University, Belgium

**Supporting intra-group social metacognitive activities with technology: a grammar learning game**
Inge Molenaar, Radboud University Nijmegen, Netherlands; Anne Horvers, Radboud University Nijmegen, Netherlands; Peter Desain, Radboud University, Netherlands

**Metacognitive regulation in collaborative science learning across different contexts**
Tuuke Iskala, University of Turku, Finland; Simone Volet, Murdoch University, Australia; Milo Koretsky, Oregon State University, United States; Cheryl Jones, Murdoch University, Australia; Marja Vauras, University of Turku, Finland

**Socio-cognitive and socio-emotional monitoring in collaborative learning**
Pia Naykki, University of Oulu, Finland; Jaana Isohätälä, University of Oulu, Finland; Sanna Järvelä, University of Oulu, Finland
## SYMPOSIUM: EXPLAINING DIFFERENCES IN TEACHER EXPECTATIONS AND THEIR EFFECTS ON STUDENT OUTCOMES

<table>
<thead>
<tr>
<th>Chair</th>
<th>Stability of Teacher Expectations: A Longitudinal Examination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petra Stanat, Humboldt-Universität zu Berlin, Germany</td>
<td>Christine Rubie-Davies, University of Auckland, New Zealand; Elizabeth R Peterson, University of Auckland, New Zealand; Penelope Watson, The University of Auckland, New Zealand; Annaline Flint, University of Auckland, New Zealand; Lynda Garrett, The University of Auckland, New Zealand; Lyn McDonald, The University of Auckland, New Zealand</td>
</tr>
<tr>
<td>Organisers</td>
<td>The Interpersonal Character of Teacher Expectations</td>
</tr>
<tr>
<td>Camilla Pjosk, Humboldt-Universität zu Berlin, Germany; Anneke Timmermans, University of Groningen, Netherlands</td>
<td>Anneke Timmermans, University of Groningen, Netherlands; Christine Rubie-Davies, University of Auckland, New Zealand; Greetje van der Werf, GlON - University of Groningen, Netherlands</td>
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<tr>
<td>Discussant</td>
<td>Effects of Teacher Expectations on Teacher Behaviour and Students’ Achievement Development</td>
</tr>
<tr>
<td>Sabine Krolak-Schwerdt, University of Luxembourg, Luxembourg</td>
<td>Sarah Gentrup, Humboldt-Universität zu Berlin, Germany; Georg Lorenz, Berlin Institute for Integration and Migration Research, Humboldt-Universitaet zu Berlin, Germany; Susanne Rahmann, Universitaet Mannheim, Germany; Petra Stanat, Humboldt-Universitat zu Berlin, Germany; Cornelia Kristen, Otto-Friedrich-Universitaet Bamberg, Germany; Irena Kogan, Universitaet Mannheim, Germany</td>
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<td></td>
<td>Merton Scores Twice: Teacher Expectations as Self-fulfilling Prophecy and Matthew Effect</td>
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<td>Orhan Agirdag, KU Leuven, Belgium</td>
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## SYMPOSIUM: CONTEXT, SUPPORT AND AGENCY IN NEW TEACHERS' INDUCTION AND LEARNING

<table>
<thead>
<tr>
<th>Chair</th>
<th>Is initiative an indicator of neglect? Social context, support, and new teachers’ learning patterns.</th>
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<tbody>
<tr>
<td>Tsafir Goldberg, University of Haifa, Israel</td>
<td>Tsafir Goldberg, University of Haifa, Israel</td>
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<tr>
<td>Discussant</td>
<td>How does the guidance offered to newly qualified teachers determine their collegial network?</td>
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<tr>
<td>Jan Vermunt, University of Cambridge, United Kingdom</td>
<td>Simon Beausaert, Maastricht University, Netherlands; Sanne De Vos, Odisee, Belgium; Johan De Wilde, Odisee, Belgium; Chloë Meredith, KU Leuven, Belgium</td>
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<td></td>
<td>Tensions of beginning teachers: Professional Identity and Agency at work</td>
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<td>Merel van der Wal, Radboud University Nijmegen, Netherlands; Harmen Schaap, Radboud University Nijmegen, Netherlands; Helma Oolbekink-Marchand, Radboud University Nijmegen, Netherlands</td>
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<tr>
<td></td>
<td>Sliders: parallel universes of novice teachers’ entrance and learning of the profession</td>
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<td></td>
<td>Tal Palevsky, University of Haifa, Israel</td>
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</tbody>
</table>
### SYMPOSIUM: TEACHER SELF-EFFICACY: DIFFERENCE, IMPACT, AND CORRELATES

| Chair | The impact of mathematics teaching efficacy on teachers’ pedagogical practices  
|       | Naomi Ingram, University of Otago, New Zealand; Mustafa Asil, University of Otago, New Zealand; David Berg, University of Otago, New Zealand  
|       | Job demands and job resources in the teaching profession: Relations with teacher self-efficacy  
|       | Einar Skaalvik, Norwegian Univ. of Science and Technology, Norway; Sidsel Skaalvik, Norwegian Univ. of Science and Technology, Norway  
|       | Enhancing Preservice Teachers' Efficacy Beliefs Through a School-University Partnership Programme  
|       | Claire Lloyd, Liverpool Hope University, United Kingdom; Sue Cronin, Liverpool Hope University, United Kingdom; Michelle Pearson, Liverpool Hope University, United Kingdom  
|       | Preservice teachers' self-efficacy and choice of teacher education in Norway and New Zealand  
|       | David Berg, University of Otago, New Zealand; Einar Skaalvik, Norwegian Univ. of Science and Technology, Norway |

### SYMPOSIUM: EXECUTIVE FUNCTIONS AS PRECURSORS OF MATHEMATICAL SKILLS

| Chair | SES related differences in gains in early math achievement are mediated by working memory  
|       | Kerry Lee, National Institute of Education, Singapore; David Munez, National Institute of Education / Nanyang Technological University, Singapore; Rebecca Bull, National Institute of Education/Nanyang Technological University, Singapore, Singapore  
|       | Working memory resources in children - stability and relation to subsequent mathematical skills  
|       | Minna Kyttälä, University of Turku, Finland; Piia Björn, University of Eastern Finland, Finland; Kaisa Kanerva, University of Helsinki, Finland  
|       | The relation between executer functions, number sense and mathematics throughout primary education  
|       | Evelyn Knesbergen, Utrecht University, Netherlands; Ilona Friso-Van den Bos, Utrecht University, Netherlands; Eveline Schoevers, Utrecht University, Netherlands  
|       | First grade children’s competence in executive functions, numeracy and listening comprehension  
|       | Minna Törnänen, University of Helsinki, Finland; Pirjo Aunio, University of Oslo / University of Helsinki, Finland; Lara Ragpot, University of Johannesburg, Unknown; Riikka Mononen, University of Oslo, Norway; Johan Korhonen, Åbo Akademi University in Vaasa, Finland; Elizabeth Henning, University of Johannesburg, South Africa |
### SYMPOSIUM: „WORK AGENCY“ - A PROMISSING CONCEPT FOR FACING CULTURALLY CHALLENGING AFFORDANCES

**Chair**
Frank Achtenhagen, University of Göttingen, Germany

**Discussants**
Doreen Holtsch, University of Zurich, Switzerland; Fritz Oser, University of Fribourg, Switzerland

<table>
<thead>
<tr>
<th>Title</th>
<th>Author(s)</th>
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<tbody>
<tr>
<td>Human agency at work: A conceptual introduction</td>
<td>Michael Goller, University of Paderborn, Germany</td>
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<tr>
<td>Migrants’ career decisions and agentic adaptability</td>
<td>Susanne Weber, Ludwig-Maximilians-Universität (LMU), Germany; Josef Guggemos, Ludwig-Maximilians-Universität (LMU), Germany</td>
</tr>
<tr>
<td>Fostering professional learning and agency – An identity coaching programme</td>
<td>Susanna Paloniemi, University of Jyväskylä, Finland; Katja Vähäsantananen, University of Jyväskylä, Finland; Päivi Hökkä, University of Jyväskylä, Finland; Anneli Eteläpelto, University of Jyväskylä, Finland</td>
</tr>
<tr>
<td>Institutional social dynamics and the absence of collective agency in academic work</td>
<td>Frank Achtenhagen, University of Göttingen, Germany; David M. Hoffman, University of Jyväskylä, Finland</td>
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</table>

### INVITED SYMPOSIUM: WHY SHOULD TEACHERS ENGAGE IN RESEARCH? - EXAMPLES FROM LEARNING STUDY AND LESSON STUDY

**Chair**
Peter Davies, University of Birmingham, United Kingdom

**Organiser**
Angelika Kullberg, University of Gothenburg, Sweden

**Discussant**
Kirsti Klette, University of Oslo, Norway

<table>
<thead>
<tr>
<th>Title</th>
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<tbody>
<tr>
<td>Learning study, Chinese lesson study and the keys of learning</td>
<td>Ming Fai Pang, The University of Hong Kong, Hong Kong; Ference Marton, Göteborg University, Sweden</td>
</tr>
<tr>
<td>Can public knowledge be created through practitioner research?</td>
<td>Anna Vikström, Luieå university of technology, Sweden; Angelika Kullberg, University of Gothenburg, Sweden; Ulla Runesson, University of Jonkoping, Sweden</td>
</tr>
<tr>
<td>The Contributions of Learning study to teacher engagement in research in an Asian setting</td>
<td>Wai Ming Cheung, The University of Hong Kong, Hong Kong; Stephanie Wing Yan Chan, The University of Hong Kong, Hong Kong; Kevin Ka-Hin Tsang, The University of Hong Kong, Hong Kong</td>
</tr>
<tr>
<td>Sustaining School and Teacher Development through Lesson-based Teaching Research Practice</td>
<td>Yanping Fang, National Institute of Education / Nanyang Technological University, Singapore</td>
</tr>
</tbody>
</table>
### Invited Symposium: Defining, Measuring, and Supporting Central Concepts in Inquiry Learning

**Chair**
Bram De Wever, Ghent University, Belgium

**Organisers**
Bram De Wever, Ghent University, Belgium; Wouter R. van Joolingen, Utrecht University, Netherlands; Annelies Raes, Ghent University, Belgium

**Discussant**
Wouter R. van Joolingen, Utrecht University, Netherlands

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors/Institutions</th>
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<tbody>
<tr>
<td>Reconceptualizing Engagement: How Embodied Interaction Can Support Collaborative Inquiry</td>
<td>Andrea Gomoll, Indiana University, United States; Cindy Hmelo-Silver, Indiana University, United States; Erin Tolar, Indiana University, United States; Selma Šabanović, Indiana University, United States</td>
</tr>
<tr>
<td>How do students deal with 2 different scripts for a collaborative inquiry scientific reasoning task</td>
<td>Nore De Grez, Ghent University, Belgium; Joni Lämsä, University of Jyväskylä, Finland; Raija Hamalainen, University of Jyväskylä, Finland; Ingo Kollar, University of Augsburg, Germany; Bram De Wever, Ghent University, Belgium</td>
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<tr>
<td>Performance-based assessment of scientific reasoning in children</td>
<td>Ard Lazonder, Radboud University, Netherlands; Noortje Janssen, University of Twente, Netherlands</td>
</tr>
<tr>
<td>How technology can support teacher and students to differentiate during web-based inquiry learning</td>
<td>Hannelore Montrieux, Ghent University, Belgium; Annelies Raes, Ghent University, Belgium; Elise Ameloot, Ghent University, Belgium; Tammy Schellens, Ghent University, Belgium</td>
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</table>
THURSDAY, 31 AUGUST 2017

Session H: 27  
Time: 10:15-11:45  
Location: Main Building A – A2A

SYMPOSIUM: EARLY CHILDHOOD EDUCATORS’ PROFESSIONAL COMPETENCES FOSTERING MATHS AND SCIENCE

Chair
Franziska Vogt, University of Teacher Education St. Gallen, Switzerland

Discussant
Yvonne Anders, Freie Universität Berlin, Germany

Teaching for Conceptual Change in Preschool: Teachers’ Professional Beliefs, Knowledge and practice
Miriam Leuchter, University of Koblenz - Landau, Germany; Henrik Saalbach, University of Leipzig, Germany; Ueli Studhalter, ETH Zurich, Switzerland Annette Tettenborn, University of Teacher Education of Lucerne, Switzerland

Preschool Teachers’ Leadership in Science Education – Making Professional Competencies Visible
Ornit Spektor-Levy, Bar-Ilan University, Israel; Anat Abramovich, Technion-Israel Institute of Technology, Israel; Taly Shechter, The School of Education, Bar Ilan University, Israel

Tailored mathematical support during play-based learning – a close look at educators’ competences
Andrea Wullschleger, University of Zurich, Switzerland; Rita Stebler, University of Zurich, Switzerland

Modeling and Measuring Professional Competence of Early Childhood Educators in Mathematics
Simone Dunekacke, Leibniz Institute for Science and Mathematics Education (IPN), Germany; Selma Seemann, IPN Kiel, Germany; Aiso Heinze, Leibniz Institute for Science and Mathematics Education (IPN), Germany; Miriam Leuchter, University of Koblenz - Landau, Germany; Anke Lindmeier, Leibniz Institute of Science and Mathematics Education (IPN), Germany; Elisabeth Moser Opitz, University of Zurich, Switzerland; Franziska Vogt, University of Teacher Education St. Gallen, Switzerland
**Session H: 28**  |  **Time: 10:15-11:45**  |  **Location: Main Building C – C6**

<table>
<thead>
<tr>
<th>SYMPOSIUM: PROMOTING DEEP LEARNING THROUGH GENERATIVE LEARNING ACTIVITIES</th>
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<tr>
<td><strong>Chair</strong></td>
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<td><strong>Organiser</strong></td>
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<td><strong>Discussant</strong></td>
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**Why does generative drawing work so well? An eye tracking study to evaluate theoretical assumptions**
Johannes Hellenbrand, University of Duisburg-Essen, Germany; Maria Opfermann, Universiteit Utrecht / Hogeschool Utrecht, Netherlands; Annett Schmeck, Universität Duisburg Essen, Germany; Detlef Leutner, University of Duisburg-Essen, Germany

**Cognitive and Metacognitive Benefits of Generative Learning Strategies**
Logan Fiorella, University of Georgia, United States

**How can CSCL-scripts transfer individual into transactive knowledge generation for deep learning?**
Stephan Mende, TU Dresden, Germany; Antje Proske, Technische Universitaet Dresden, Germany; Susanne Narciss, TU Dresden, Germany

**Effects of an Emotion Regulation and Metacognitive Training on Knowledge Generation in Mathematics**
Tina Montreuil, McGill University, Canada
### POSTER PRESENTATION: PO: TEACHING AND TEACHER EDUCATION

**Chair**  
Paul Warwick, University of Cambridge, United Kingdom

**Teachers’ epistemic thinking: Investigating effects of knowledge domains and educational fields**  
Tessa van Schijndel, Leiden University, Netherlands; Nadira Saab, Leiden University, Netherlands; Amanda Berry, RMIT University, Australia; Jan van Driel, The University of Melbourne, Australia

**Development of Web-based Investigation System for Teachers’ Judgements on Students’ Performance**  
Kae Nakaya, University of Tokyo, Japan; Kazuhiro Yamaguchi, The University of Tokyo, Japan; Hidekazu Kaminishi, Dokkyo Medical University, Japan; Tatsushi Fukaya, Gunma University, Japan; Yuri Uesaka, University of Tokyo, Japan; Masanori Nakagawa, Otsuma Women’s University, Japan

**How students in schools with personalized learning concepts solve mathematical problems**  
Mirjam Schmid, University of Fribourg, Switzerland; Christine Pauli, University of Fribourg, Switzerland

**How can teachers promote children’s effective learning strategy use while doing Kanji homework?**  
Eriko Ota, University of Tokyo, Japan

**Learning to diagnose – Aiming to support students in their learning process**  
Rita Hofmann, University of Koblenz-Landau, Germany; Jürgen Roth, University of Koblenz-Landau, Germany

**How school context and other factors relate to teachers’ attitudes toward teaching integrated STEM.**  
Lieve Thibaut, KU Leuven, Belgium; Heidi Knipparth, KU LEUVEN, Belgium; Wim Dehaene, KU LEUVEN, Belgium; Fien Depaepe, KU Leuven, Belgium

**Annotations:**  
The presentation by Tessa van Schijndel (Teachers’ epistemic thinking: Investigating effects of knowledge domains and educational fields) is cancelled and replaced by Mireille Hubers (Paving the Road to Sustainable Educational Change).
**POSTER PRESENTATION: PO: MOTIVATION AND EMOTION**

| Chair | Development and validation of an emotion regulation strategies self-reported instrument  
Monika Waldis, University of Applied Sciences Northwestern Switzerland, Switzerland  
Vanessa Hanin, Université catholique de Louvain (UCL), Belgium; Van Nieuwenhoven Catherine, Université catholique de Louvain (UCL), Belgium  
Is it all about the goal? Findings on cardiac reactivity in a laboratory mental arithmetic task.  
Sigrid Wimmer, University of Graz, Austria; Helmut Lackner, Medical University of Graz, Austria; Silke Luttenberger, University of Teacher Education Styria, Austria; Ilona Papousek, University of Graz, Austria; Manuela Paechter, University of Graz, Austria  
Giving and Taking?! Cooperation and Competition among University Students  
Kerstin Helker, RWTH Aachen University, Germany; Carolin Schultz, RWTH Aachen University, Germany; Maike Harff, RWTH Aachen University, Germany; Karen Zschocke, RWTH Aachen University, Germany  
Students’ Affect and Group Work During Science Learning  
Tarja Pietarinen, University of Turku, Finland; Marja Vauras, University of Turku, Finland; Simone Volet, Murdoch University, Australia  
Emotions in Group Work Settings at University  
Marold Wosnitza, RWTH Aachen University, Germany  
Students at risk for early academic drop-out  
Elke Baten, University of Ghent, Belgium; MarieClaire Vandevenelde, Ghent University, Belgium; Edwin Hantson, Ghent University, Belgium; Brigitte De Craene, Ghent University, Belgium; Annemie Desoete, Ghent University & Artevelde University College, Belgium |

**ANNOTATIONS:**
THE PRESENTATION BY MAROLD WOSNITZA (EMOTIONS IN GROUP WORK SETTINGS AT UNIVERSITY) IS CANCELLED.
### POSTER PRESENTATION: PO: HIGHER EDUCATION

| Chair | Job Requirements and their Fulfilment during the first Years on Job: Findings from a Graduate Survey  
Sonja Markwalder, University of Applied Sciences and Arts Northwestern Switzerland, Switzerland |
|---|---|
| | Developing student-led research: Customer, consumer, colleague, collaborator  
Elaine Tan, Newcastle University, United Kingdom; eleanor loughlin, Durham University, United Kingdom; Andrew Joyce-Gibbon, Durham University, United Kingdom |
| | How does peer-group mentoring support university teachers’ work and well-being?  
Saara Repo, University of Helsinki, Finland; Nina Katajavuori, University of Helsinki, Finland |
| | Socioeconomic Status and Students’ Prerequisites in Studies of the Social Sciences  
Heike Dietrich, Heidelberg University, Germany; Eric Klopp, Saarland University, Germany; Ying Zhang, saarland university, China; Roland Bruenken, Saarland University, Germany; Ulrike-Marie Krause, University of Oldenburg, Germany; Frank Spinath, Saarland University, Germany; Robin Stark, Saarland University, Germany; Birgit Spinath, Heidelberg University, Germany |
| | Significant events and skills development in the first year of PhD doctoral students  
Paula Mayoral, Ramon Llull University, Spain; Lorena Becerril, Blanquerna, Universitat Ramon Llull, Spain |
| | Exploring pre-service primary teachers’ perception of thinking skills  
Manoli Pifarré Turmo, University of Lleida, Spain |

**ANNOTATIONS:**

**THE PRESENTATION BY PAULA MAYORAL (SIGNIFICANT EVENTS AND SKILLS DEVELOPMENT IN THE FIRST YEAR OF PHD DOCTORAL STUDENTS) IS CANCELLED.**
### POSTER PRESENTATION: PO: INSTRUCTIONAL DESIGN

**Chair**
Grete Arro, Tallinn University, Estonia

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td>The impact of historical thinking on civic attitudes. Flemish case study migration history</td>
<td>Karel Van Nieuwenhuyse, KU Leuven, Belgium; Ellen Claes, KU Leuven - University of Leuven, Belgium</td>
</tr>
<tr>
<td>Self-regulated learning in problem-based learning from the educator’s perspective</td>
<td>Sanne Rovers, Maastricht University, Netherlands; Geraldine Clarebout, Maastricht University, Netherlands</td>
</tr>
<tr>
<td>Background Music – Stimulating Effect or Seductive Detail?</td>
<td>Janina Lehmann, Ulm University, Germany; Tina Seufert, University of Ulm, Germany</td>
</tr>
<tr>
<td>Activation of Students’ Prior Knowledge in Technology Education in Primary School</td>
<td>Dannie Wammes, Utrecht University, Netherlands; Liesbeth Kester, Utrecht University, Netherlands; Bert Sif, Utrecht University, Netherlands; Willemijn Schot, Utrecht University, Netherlands</td>
</tr>
<tr>
<td>Interaction-based Coding of Scaffolding</td>
<td>Hanna Mach, Goethe-Universität Frankfurt, Germany; Rico Hermkes, Goethe-Universität Frankfurt, Germany; Gerhard Minnameier, Goethe-Universität Frankfurt, Germany</td>
</tr>
<tr>
<td>Is there an Interplay of Emotional Design and Learning with Inference Prompts?</td>
<td>Sabrina Navratil, University of Mannheim, Germany; Tim Küh, University of Mannheim, Germany; Steffi Heidig, Technical University of Dresden, Germany</td>
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**ANNOTATIONS:**

**IMPORTANT NOTICE:** THIS SESSION WILL TAKE PLACE IN ROOM PINNI B - B4115
<table>
<thead>
<tr>
<th>Chair</th>
<th>Mindset in Secondary Vocational Education and Training (VET)</th>
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<tbody>
<tr>
<td>Yi-Jhen Wu, University of Bamberg, Germany</td>
<td>Jaap Glerum, UCR / Utrecht University, Netherlands; Sofie Loyens, University College Roosevelt, Netherlands; Remigius (Remy) Rikers, UCR / Utrecht University, Netherlands</td>
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</tbody>
</table>

Motivational commercials for framing learning: A large-scale goal-framing intervention
Nicholas Bovee, Kyushu Sangyo University, Japan; Luke K. Fryer, The University of Hong Kong, Hong Kong; Paul Ginns, University of Sydney, Australia

How do cognitive and emotive factors predict academic performance in secondary school children?
Enrica Donolato, University of Padova, Italy; David Giofrè, Liverpool John Moores University, United Kingdom; Irene C. Mammarella, University of Padova, Italy

Self-Regulation and Wellbeing
Brigitte Rollett, University of Vienna, Austria; Vanessa Radl, Department of Applied Psychology: Health, Development, Enhancement and Intervention, University of Vienna, Austria; Helena Hartmann, Department of Applied Psychology: Health, Development, Enhancement and Intervention, University of Vienna, Austria; Benedikt Winter, Department of Applied Psychology: Health, Development, Enhancement and Intervention, University of Vienna, Austria

Intra-individual variation in homework effort: Analyzing the effect of gender and conscientiousness
Desiree Theis, German Institute for International Educational Research (DIPF), Germany; Brigitte Brisson, German Institute for International Educational Research (DIPF), Germany

Intervening to promote engineering student success in technical, non-major, required barrier courses
Jenefer Husman, University of Oregon, United States; Katherine Nelson, Rowan University, United States; Kat Cheng, Arizona State University, United States

ANNOTATIONS:
THE PRESENTATION BY NICHOLAS BOVEE (MOTIVATIONAL COMMERCIALS FOR FRAMING LEARNING: A LARGE-SCALE GOAL-FRAMING INTERVENTION) IS CANCELLED.
<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulation of Collaboration: Regulatory Knowledge and Performance in Problem-based Learning</td>
<td>Jun Oshima, Shizuoka University, Japan; Ritsuko Oshima, Shizuoka University, Japan; Takashi Shibata, Shizuoka University, Japan</td>
</tr>
<tr>
<td>Integrative possibilities in doctoral supervision: A four quadrant model</td>
<td>Kylie Shaw, SORTI, The University of Newcastle, Australia; Allyson Holbrook, SORTI, The University of Newcastle, Australia</td>
</tr>
<tr>
<td>Instruction on disagreement resolution in reasoning about multiple documents</td>
<td>Toshio Mochizuki, Senshu University, Japan; Clark Chinn, Rutgers University, United States; Etsuji Yamaguchi, Kobe University, Japan; Randi Zimmerman, Rutgers University Graduate School of Education, United States</td>
</tr>
<tr>
<td>Is genetic engineering threatening my life? Fostering decision-making processes in risk perception</td>
<td>Martina Heist, University Koblenz-Landau, Germany; Jochen Scheid, University Koblenz-Landau, Germany; Alexander Kauertz, University Koblenz-Landau, Germany; Sandra Nitz, University Koblenz-Landau, Germany</td>
</tr>
<tr>
<td>Prompting collaboration with scripts and architectural design in start-up companies</td>
<td>Arto Mykkänen, University of Oulu, Finland; Pia Markkanen, University of Oulu, Finland, Finland; Aku Visuri, University of Oulu, Finland, Finland</td>
</tr>
<tr>
<td>Exploring dialogue transformation in hybrid classrooms</td>
<td>Jo Inge Johansen Freytag, University of Oslo, Norway</td>
</tr>
<tr>
<td>Chair</td>
<td>Relating information of different teacher knowledge components: Effects of writing tasks and prompts</td>
</tr>
<tr>
<td>-------------------------------</td>
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</tr>
<tr>
<td>Anne van Hoogmoed, University of Groningen, Netherlands</td>
<td>Thomas Lehmann, University of Bremen, Germany; Benjamin Rott, University of Duisburg-Essen, Germany; Florian Schmidt-Borchering, University of Bremen, Germany</td>
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<tr>
<th>Chair</th>
<th>Educating trainee teachers through video modeling to manage confirmation bias in decision making</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suzan van Brussel, Avans University of Applied Sciences, Netherlands; Miranda Timmermans, Avans Hogeschool / Avans University of Applied Sciences, Netherlands; Peter Verkoeijen, Erasmus University Rotterdam, Netherlands; Fred Paas, Erasmus University Rotterdam/University of Wollongong, Netherlands</td>
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<table>
<thead>
<tr>
<th>Chair</th>
<th>Should pictures be drawn during a lesson or presented already-drawn?</th>
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</thead>
<tbody>
<tr>
<td>Leonora Coppens, Utrecht University, Netherlands; Liesbeth Kester, Utrecht University, Netherlands</td>
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<thead>
<tr>
<th>Chair</th>
<th>Poking the cognitive process of tracing in learning via think aloud.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paul Ginns, University of Sydney, Australia; Michael Tang, University of Sydney, Australia; Michael Jacobson, University of Sydney, Australia</td>
<td></td>
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<thead>
<tr>
<th>Chair</th>
<th>Effects of modality of feedback presentation on post-feedback behavior in task-oriented reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amelia Mana, University of Valencia, Spain; Vicenta Avila, University of Valencia / Interdisciplinary Research Structure for Reading Research (ERI Lectura), Spain; Eduardo Vidal-Abarca, Universidad de Valencia, Spain</td>
<td></td>
</tr>
</tbody>
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<thead>
<tr>
<th>Chair</th>
<th>Examining Collective Inquiry and Knowledge Advances in a Knowledge Building Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yuyao Tong, The University of Hong Kong, China</td>
<td></td>
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</tbody>
</table>

**Annotations:**

*THE PRESENTATION BY PAUL GINNS (POKKING THE COGNITIVE PROCESS OF TRACING IN LEARNING VIA THINK ALOUD.) IS CANCELLED.*
### POSTER PRESENTATION: PO: MOTIVATION AND EDUCATIONAL EVALUATION

<table>
<thead>
<tr>
<th>Chair</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Angelika Kullberg, University of Gothenburg, Sweden</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>“I don’t feel alone”: Young girls’ emotional bonds with media</td>
<td>Susan Beltman, Curtin University, Australia; Madeleine Dobson, Curtin University, Australia</td>
</tr>
<tr>
<td>Teachers’ Emotions: lesson, student-group and teacher effects</td>
<td>Lars-Erik Malmberg, University of Oxford, United Kingdom; Reinhard Pekrun, Ludwig-Maximilians-Universität (LMU), Germany</td>
</tr>
<tr>
<td>The effect of praise by friends on intrinsic motivation</td>
<td>Kyosuke Kakinuma, Doshisha University, Japan; Ayumi Tanaka, Doshisha University, Japan</td>
</tr>
<tr>
<td>Emotion regulation and achievement emotions in elementary school</td>
<td>Daniela Raccanello, University of Verona, Italy; Margherita Brondino, University of Verona, Italy; Angelica Moa, University of Padova, Italy; Stephanie Lichtenfeld, Ludwig-Maximilians-Universität, Munich, Germany</td>
</tr>
<tr>
<td>children: longitudinal data</td>
<td></td>
</tr>
<tr>
<td>Distribution of resources: A quantitative study on logics of action within inclusive schools</td>
<td>Jennifer Lambrecht, University of Potsdam, Germany; Stefanie Bosse, University of Potsdam, Germany; Thorsten Henke, University of Potsdam, Germany; Katja Bogda, Universität Potsdam, Germany; Nadine Spörer, University of Potsdam, Germany</td>
</tr>
<tr>
<td>The impact of evaluation context, motivation and social desirability on school self-evaluation data</td>
<td>Jerich Faddar, University of Antwerp, Belgium; Jan Vanhoof, University of Antwerp, Belgium; Sven De Maeyer, University of Antwerp, Belgium</td>
</tr>
</tbody>
</table>
### Session I: 9  
**Time:** 12:00-13:30  
**Location:** Main Building A - A08

#### POSTER PRESENTATION: PO: TEACHING APPROACHES

**Chair**  
Ann-Carita Evaldsson, Uppsala University, Sweden

**Linking the unlinkable – transdisciplinary collaboration between universities and business**  
Petra Biberhöfer, Vienna University of Economics and Business, Austria; Claudia Lintner, Free University of Bolzano, Italy; Johanna Bernhardt, Terra Institute, Italy; Marco Rieckmann, University of Vechta, Germany

**The role of beliefs in teacher education. Reflecting on pedagogical beliefs**  
Eveline Christof, University of Innsbruck, Austria

**How do situated competences in classroom management develop over teacher education?**  
Bernadette Gold, University of Erfurt, Germany; Manfred Holodynski, University of Muenster, Germany

**Teachers’ Epistemic Cognition in Classroom Assessment**  
Helenrose Fives, Montclair State University, United States; Nicole Barnes, Montclair State University, United States; Michelle Buehl, George Mason University, United States; Julia Mascadri, Queensland University of Technology (QUT), Australia; Nathan Ziegler, South Dakota State University, United States

**The impact of staged video vignettes on teachers’ nonverbal classroom management knowledge**  
Julia Bönte, University of Duisburg-Essen, Germany; Rijana Nissing, University of Duisburg-Essen, Germany; Gerlinde Lenske, Universität Koblenz-Landau, Germany; Theresa Dicke, Australian Catholic University, Australia; Detlev Leutner, University of Duisburg-Essen, Germany

**Need for Cognitive Closure of Student Teachers and Their Classroom Management Practice**  
Katerina Vickova, Masaryk University, Czech Republic; Katerina Lojdova, Masaryk University, Czech Republic; Jan Mares, Faculty of Education, Masaryk University, Brno, Czech Republic; Jan Sirucek, Faculty of Social Sciences, Masaryk University, Brno, Czech Republic

### Session I: 10  
**Time:** 12:00-13:30  
**Location:** Linna - K110

#### ROUNDTABLE: RT: LEARNING AND PROFESSIONAL DEVELOPMENT

**Chair**  
Hua Loon Ling, The University of Hong Kong, Hong Kong

**Designing a professional development programme on reading for beginning teachers**  
Iris Vansteelandt, AP University College/Ghent University, Belgium; Hilde Van Keer, Ghent University, Belgium; Suzanne E. Mol, Leiden University, Netherlands

**Training Reactions as Predictors of Autonomous and Controlled Motivation to Transfer**  
Andreas Gegenfurtner, Technische Hochschule Deggendorf, Germany; Karina Fisch, Technische Hochschule Deggendorf, Germany; Martina Reitmaier, Technische Hochschule Deggendorf, Germany

**Strengthening school resilience against corruption through integrity standards and involvement**  
Mihaylo Miloravanovitch, Center for Applied Policy, Austria; Tinde Kovac Cerovic, University of Belgrade, Hungary; Kate Lapham, Open Society Foundations, United States
POSTER PRESENTATION: PO: PROFESSIONAL DEVELOPMENT AND LIFELONG LEARNING

Chair
Telle Halikari, University of Helsinki, Finland

Comparison of Finnish and German teacher students’ motivations for choosing teaching career
Christian Harteis, University of Paderborn, Germany; Jani Ursin, University of Jyväskylä, Finland; Katja Vähäsananta, University of Jyväskylä, Finland; Michael Goller, University of Paderborn, Germany; Dagmar Festner, University of Paderborn, Germany

Career guidance of students in secondary vocational education for lifelong learning
Marinka Kuijpers, The Hague University of Applied Sciences, Netherlands

Computationally Enhanced Simulators of Professional Practice to Improve Proportional-Reasoning
Ilana Dubovi, University of Haifa, Israel; Sharona T. Levy, University of Haifa, Faculty of Education, Israel; Efrat Dagan, University of Haifa, Israel

Paramedics’ technical/non-technical skills and the role of knowledge, self-assessment and attitude
Michael Schumann, University of Regensburg, Germany; Helen Jossberger, University of Regensburg, Germany; Hans Gruber, University of Regensburg, Germany; Bernhard Graf, University Hospital Regensburg, Germany; York Zausig, University Hospital Regensburg, Germany

How HE educators learn to teach Massive Open Online Courses. A case study
Tina Papathoma, Open University, United Kingdom; Allison Littlejohn, Open University, United Kingdom; Rebecca Ferguson, The Open University, United Kingdom, United Kingdom

Professional Development in Sculpting: Analysis of Social Interactions and Activities
Helen Jossaberg, University of Regensburg, Germany; Linda Puppe, Universität Regensburg, Germany; Birgit Eichspeger, University of Regensburg, Germany; Hans Gruber, University of Regensburg, Germany

ANNOTATIONS:
The presentation by Ilana Dubovi (Computationally Enhanced Simulators of Professional Practice to Improve Proportional-Reasoning) is cancelled.

ICT DEMONSTRATION: GET UNDERGRADUATES OFF FACEBOOK AND INTO LEARNING WITH GAME-BASED STUDENT RESPONSE SYSTEMS

Chair
Eero Ropo, University of Tampere, Finland

Get undergraduates off Facebook and into learning with game-based student response systems
Ioli Nicolaou, Cyprus University of Technology, Cyprus; Georgia Christou, Cyprus University of Technology, Cyprus

ANNOTATIONS:
Important notice: this session is moved to Room Main Building - ML5 (Computer Lab).
**Session I: 13**

**Time:** 12:00-13:30  
**Location:** Pinni B - B4117

**WORKSHOP: ASSURING ASSESSMENT QUALITY IN HIGHER PROFESSIONAL EDUCATION. TOWARDS A SUCCESSFUL STRATEGY**

**Chair**  
Thomas Martens, Medical School Hamburg, Germany

**Assuring assessment quality in higher professional education. Towards a successful strategy**  
Anneriet Florack, Zuyd University of Applied Sciences, Netherlands; Dominique Sluijsmans, Zuyd University of Applied Sciences, Netherlands

**ANNOTATIONS:**  
THIS SESSION WILL BE CHAIRMED BY ELSA ERIKSDOTTIR, REPLACING THOMAS MARTENS.

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**Session I: 14**

**Time:** 12:00-13:30  
**Location:** Main Building C - C5

**ICT DEMONSTRATION: HOW TO IMPLEMENT THE OBSERVATION STRATEGIES TO RAISE THE QUALITY OF EARLY CHILDHOOD EDUCATION (ECEC)**

**Chair**  
Robert Kordts-Freudinger, Paderborn University, Germany

**How to implement the observation strategies to raise the Quality of Early Childhood Education (ECEC)**  
James Ko, The Education University of Hong Kong, Hong Kong; Jyrki Reunamo, University of Helsinki, Finland; Hui-Chun Lee, Tzu Chi University, Taiwan; Li-Chen Wang, Chang Gung University of Science and Technology, Taiwan; Hui-Hua Chen, National Dong Hwa University, Taiwan; Shu-Shuan Shih, Tzu Chi University, Taiwan

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**Session I: 15**

**Time:** 12:00-13:30  
**Location:** Pinni B - B3111

**ICT DEMONSTRATION: DETECTION, COORDINATION AND REPORTING OF INDIVIDUAL STUDENT COMPETENCY DEVELOPMENT WITH MYCOMPETENCE**

**Chair**  
Angelica Moë, University of Padova, Italy

**Detection, coordination and reporting of individual student competency development with myCompetence**  
Claude Mueller, Zurich University of Applied Sciences, Switzerland; Jakob Ott, Zurich University of Applied Sciences, Switzerland; Jennifer Eriemann, ZHAW School of Management and Law, Germany
<table>
<thead>
<tr>
<th>Session I: 16</th>
<th>Time: 12:00-13:30</th>
<th>Location: Main Building A - A34</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WORKSHOP: TEACHERS’ PERCEPTIONS ON ASSESSMENT IN HIGHER PROFESSIONAL EDUCATION.</strong></td>
<td></td>
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<tr>
<td><strong>Chair</strong></td>
<td>Teachers’ Perceptions on Assessment in Higher Professional Education.</td>
<td></td>
</tr>
<tr>
<td>Joana Pipa, University of Lisbon, Portugal</td>
<td>Dorien Gerards, Zuyd University of Applied Sciences, Netherlands; Dominique Sluijsmans, Zuyd University of Applied Sciences, Netherlands</td>
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<td><strong>ANNOTATIONS:</strong></td>
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<tr>
<td>THIS SESSION WILL BE CHAIRED BY JULIANE RICHTER, REPLACING JOANA PIPA.</td>
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</tbody>
</table>

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<thead>
<tr>
<th>Session I: 17</th>
<th>Time: 12:00-13:30</th>
<th>Location: Main Building A - A07</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ICT DEMONSTRATION: RECORDING, VISUALISING AND ANALYSING WEB BASED LEARNING PROCESSES WITH THE SCREENANALYTICS SOFTWARE</strong></td>
<td></td>
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<tr>
<td><strong>Chair</strong></td>
<td>Recording, visualising and analysing web based learning processes with the ScreenAnlytics software</td>
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<tr>
<td>Triinu Kärbla, University of Tartu, Estonia</td>
<td>Markus Hörmann, Technical University of Munich (TUM), Germany; Maria Bannert, Technical University of Munich (TUM), Germany</td>
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<tr>
<td><strong>ANNOTATIONS:</strong></td>
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<tr>
<td>THIS SESSION IS CHAIRED BY TOBIAS ROLFES, REPLACING TRIINU KÄRBLA.</td>
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<tr>
<th>Session I: 18</th>
<th>Time: 12:00-13:30</th>
<th>Location: Main Building D - D12</th>
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</thead>
<tbody>
<tr>
<td><strong>ICT DEMONSTRATION: SMART LEARNING PATHS - USING ARTIFICIAL INTELLIGENCE TO PROVIDE INDIVIDUAL SUPPORT IN ELEARNING</strong></td>
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<tr>
<td><strong>Chair</strong></td>
<td>Smart Learning Paths - Using Artificial Intelligence To Provide Individual Support in eLearning</td>
<td></td>
</tr>
<tr>
<td>Jingjing Sun, University of Montana, United States</td>
<td>Topi Litmanen, Claned Group, Finland; Miska Noponen, Claned Group, Finland; Ilkka Autio, Claned Group, Finland</td>
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<tr>
<td><strong>ANNOTATIONS:</strong></td>
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<tr>
<td>THIS SESSION WILL BE CHAIRED BY LILIANA SILVA, REPLACING JINGJING SUN.</td>
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<tr>
<th>Session I: 19</th>
<th>Time: 12:00-13:30</th>
<th>Location: Main Building A - A35</th>
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<tbody>
<tr>
<td><strong>ICT DEMONSTRATION: THE BRITISH EDUCATION RESEARCH TOOL (BERTIE)</strong></td>
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<tr>
<td><strong>Chair</strong></td>
<td>The British Education Research Tool (BERTIE)</td>
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<tr>
<td>Gabriela González Ocampo, Ramon Llull University, Spain</td>
<td>Kate Reynolds, Bath Spa University, United Kingdom</td>
<td></td>
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</tbody>
</table>
### Session I: 20

**Time:** 12:00-13:30  
**Location:** Main Building A - A21

**WORKSHOP: EXPLORING, CATCHING & CREATING: MAKING LANGUAGE AWARENESS VISIBLE WITH LINGUISTIC REASONING**

**Chair**  
Christian Brandmo, University of Oslo, Norway

**Exploring, catching & creating: Making language awareness visible with linguistic reasoning**  
Ellen van den Broek, Radboud University Nijmegen, Netherlands; Roy Dieleman, Radboud University Nijmegen, Netherlands

### Session I: 21

**Time:** 12:00-13:30  
**Location:** Pinni A - A3098

**WORKSHOP: LESSON STUDY AS A TOOL TO STRENGTHEN TEACHERS’ COMPETENCIES AS A LEARNING PROFESSIONAL**

**Chair**  
Josepa Alemany-Costa, Spain

**Lesson Study as a Tool to Strengthen Teachers’ Competencies as a Learning Professional**  
Sui Lin Goei, Windesheim University of Applied Sciences, Netherlands; Nellie Verhoeven, ELAN, University of Twente, Netherlands; Siebrich De Vries, University of Groningen, Netherlands

### Session I: 22

**Time:** 12:00-13:30  
**Location:** Main Building C - C7

**WORKSHOP: MIXED METHODS IN EDUCATIONAL RESEARCH**

**Chair**  
Mirjamaja Mikkila-Erdmann, University of Turku, Finland

**Mixed methods in educational research**  
Judith Schoonenboom, University of Vienna, Austria

**ANNOTATIONS:**  
IMPORTANT NOTICE: THIS SESSION WILL TAKE PLACE IN ROOM MAIN BUILDING A - A05.

### Session I: 23

**Time:** 12:00-13:30  
**Location:** Pinni B - B3117

**WORKSHOP: CAUSAL INFERENCE IN EDUCATIONAL RESEARCH: A DISCUSSION ABOUT STATISTICAL METHODS**

**Chair**  
Martijn Meeter, VU University Amsterdam, Netherlands

**Causal Inference in Educational Research: A discussion about Statistical Methods**  
Valentina Giacom, Universidad de Chile / Université Grenoble Alpes, France; Pascal Bressoux, Université Grenoble Alpes, France; Patricio Felmer, Universidad de Chile, Chile
### Session I: 24
**Time:** 12:00-13:30  
**Location:** Main Building A - A31

**ICT DEMONSTRATION: INCREASING EQUITY AND CHALLENGING DISADVANTAGE**

**Chair**  
Michael Besser, Leuphana University of Lüneburg, Germany

**Increasing Equity and Challenging Disadvantage**  
Catalina Lomos, LISER - Luxembourg Institute for Socio Economic Research, Luxembourg; Amina Kafai-Alif, Agency for Development of Quality in Schools, Ministry of National Education, Children and Youth, Luxembourg, Luxembourg

**Annotations:**  
This session has been cancelled.

### Session I: 25
**Time:** 12:00-13:30  
**Location:** Main Building E - E222

**ICT DEMONSTRATION: INTERACTIVE FEEDBACK ABOUT INSTRUCTIONAL QUALITY: EASY DISTRIBUTION AND USAGE TRACKING**

**Chair**  
David Galbraith, University of Southampton, United Kingdom

**Interactive Feedback about Instructional Quality: Easy Distribution and Usage Tracking**  
Samuel Merk, University of Tübingen, Germany

**Annotations:**  
This session will be chaired by Kirs Sandberg, replacing David Galbraith.

### KEYNOTES - PART 2:1
**Time:** 13:45-15:15  
**Location:** Main Building A - Main Auditorium

**EARLI KEYNOTE SESSION: CHANGING COMPETENCE NEEDS AND INTERNATIONAL COMPARATIVE ASSESSMENTS**

**Chair**  
Erno Lehtinen, University of Turku, Finland

**Changing Competence Needs and International Comparative Assessments**  
Jouni Väliläri, University of Jyväskylä, Finland

### KEYNOTES - PART 2:2
**Time:** 13:45-15:15  
**Location:** Tampere Hall - Big Auditorium

**EARLI KEYNOTE SESSION: MOVING BEYOND RHETORIC: A CULTURE TO SUBSTANTIATE RESEARCH BASED TEACHER EDUCATION**

**Chair**  
Marita Mäkinen, University of Tampere, Finland

**Moving Beyond Rhetoric: a Culture to Substantiate Research Based Teacher Education**  
Kari Smith, Norwegian University of Science and Technology, Norway
### EARLI KEYNOTE SESSION: PROMOTING ADAPTIVE REGULATION: PROGRESS, CHALLENGES AND POSSIBILITIES

<table>
<thead>
<tr>
<th>Chair</th>
<th>Promoting Adaptive Regulation: Progress, Challenges and Possibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sanna Järvelä, University of Oulu, Finland</td>
<td>Allyson Hadwin, University of Victoria, Canada</td>
</tr>
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</table>

### SINGLE PAPER: ASSESSMENT METHODS AND TOOLS

<table>
<thead>
<tr>
<th>Chair</th>
<th>Toward a better judgment of item relevance in progress testing.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marij Veldman, University of Groningen, Netherlands</td>
<td>Xandra Janssen-Brandt, Zuyd University of Applied Sciences, Netherlands; Dominique Sluijsmans, Zuyd University of Applied Sciences, Netherlands; Arno Muijtjens, Maastricht University, Netherlands</td>
</tr>
</tbody>
</table>

*Evaluating the Alignment of Examinations: The Student Perspective*

Tobias Halbherr, Swiss Federal Institute of Technology Zurich / ETH Zurich, Switzerland

*Development of rubrics to assess the reflective thinking of university students*

Patrick Lai, Hong Kong Polytechnic University, Hong Kong

*Analysis of the Comprehension Tasks of National Standardised Tests of Estonian Language*

Trinu Kärba, University of Tartu, Estonia; Krista Ulbu, University of Tartu, Estonia; Mairi Männamaa, University of Tartu, Estonia
### Session J: 2  |  Time: 15:45-17:15  |  Location: Pini B - B4116

**SINGLE PAPER: COMPUTER-SUPPORTED COLLABORATIVE LEARNING**

<table>
<thead>
<tr>
<th>Chair</th>
<th>Title</th>
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</thead>
</table>
| Sindu George, Monash University, Australia | Scaffolding elementary school students’ collaborative learning on tablets  
Lara Johanna Schmitt, Saarland University, Germany; Armin Weinberger, Saarland University, Germany |
|  | Development of the Collaborative Skills Questionnaire (CoISQ) – first results of a pilot study  
Anita Pásztor-Kovács, University of Szeged Doctoral School of Education, Hungary; Attila Pásztor, MTA-SZTE Research Group on the Development of Competencies, Hungary |
|  | Critique is good. Suggesting corrections is better: Sharing Peer Ideas during Inquiry Learning  
Astrid Wichmann, Ruhr University Bochum, Germany; Camillia Matuk, New York University, United States; Elissa Sato, University of California-Berkeley, United States; Libby Gerard, University of California-Berkeley, United States; Jacquie Madhok, University of California-Berkeley, United States; Marcia Linn, University of California-Berkeley, United States |
|  | Examining and Developing Epistemic Cognition in Computer-Supported Collaborative Knowledge Building  
Carol Chan, The University of Hong Kong, Hong Kong; Ivan Lam, Open University of Hong Kong, Hong Kong |

### Session J: 3  |  Time: 15:45-17:15  |  Location: Linna - K103

**SINGLE PAPER: MOTIVATION AND EMOTION - B**

<table>
<thead>
<tr>
<th>Chair</th>
<th>Title</th>
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</table>
| Meng-Jung Tsai, National Taiwan University of Science & Technology, Taiwan | Surface and Deep Learning, Problematic Internet Use, and Fear of Missing Out (FoMO)  
Dorit Alt, Kinneret College on the Sea of Galilee, Israel; Meyran Boniel-Nissim, Kinneret College on the Sea of Galilee, Israel |
|  | Individual and group-level affective aspects of small group work in high school science.  
Martina Nieswandt, University of Massachusetts Amherst, United States; Elizabeth McEneaney, University of Massachusetts Amherst, United States |
|  | Emotion regulation in primary school children: A systematic review  
Juliane Schlesier, University of Oldenburg, Germany; Barbara Moschner, Carl von Ossietzky Universität Oldenburg, Germany; Ingo Roden, Carl von Ossietzky University Oldenburg, Germany |
|  | The Interplay of Motivational Regulation and Social Support for Successful Academic Learning  
Thomas Martens, Medical School Hamburg, Germany |
### Session J: 4  |  Time: 15:45-17:15  |  Location: Pinni B - B1096

**SINGLE PAPER: HIGHER EDUCATION - M**

**Chair**
Dominique Rauch, German Institute for International Educational Research (DIPF), Germany

**Practically Oriented Modelling and Validation of Competency Frameworks**
Alexander Baumgartner, ZHAW School of Management and Law, Switzerland; Claude Müller Werder, ZHAW School of Management and Law, Switzerland

**Integrated authentic assessment design for motivation and quality learning**
Graham Hendry, University of Sydney, Australia; Elise Baker, The University of Sydney, Australia; Michael McDonnell, The University of Sydney, Australia

**Understanding the underpinnings of complex problem solving in a higher-education setting**
Manuel Muzzo, CIIPME(CONICET)-UADE, Argentina; Pablo Gonzalez, UADE University, Argentina; Maida Mustafic, University of Luxembourg, Luxembourg; Samuel Greiff, University of Luxembourg, Luxembourg; Eduardo C. Cascallar, KU Leuven, United States

**21st Century Skills in the Higher Education Development Projects**
Mikko Vesilernaho, University of Jyväskylä, Finland; Tuula Nousiainen, University of Jyväskylä, Finland; Anne Virtanen, University of Jyväskylä, Finland; Janne Fagerlund, University of Jyväskylä, Finland; Jenni Rikala, University of Jyväskylä, Finland

### Session J: 5  |  Time: 15:45-17:15  |  Location: Virta - 113

**SINGLE PAPER: WRITING - B**

**Chair**
Taiga Brah, University of Tübingen, Germany

**Children’s beliefs on leisure time writing: the pivotal role of motivation**
Lisa Birnbaum, University of Erlangen-Nuremberg, Germany; Elisabeth M. Schüller, Leibniz-Institut für Bildungsverläufe (LiBi) Bamberg, Germany; Stephan Kroener, Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Germany

**Teaching Novice Middle School Writers to Construct and Critique Scientific Explanations**
Susan De La Paz, University of Maryland, United States; Daniel Levine, University of Maryland, United States

**Writing Talk: Teacher Modelling of Metalinguistic Thinking about Writing**
Debra Myhill, University of Exeter, United Kingdom; Susan Jones, University of Exeter, United Kingdom; Helen Lines, University of Exeter, United Kingdom

**Handwriting automaticity and writing instruction in Australian kindergarten: An exploratory study**
Debora Valcan, Murdoch University, Australia; Anabela Malpique, Murdoch University, Australia / University of Lisbon, Portugal, Australia; Deborah Pino-Pasternak, Murdoch University, Australia

**Annotations:**
The presentation by Lisa Birnbaum (Children’s beliefs on leisure time writing: the pivotal role of motivation) is cancelled.
### Session J: 6

**Time:** 15:45-17:15  
**Location:** Pinni B - B4113

**SINGLE PAPER: MOTIVATION AND ACHIEVEMENT**

| Chair | Choice of STEM-Subjects for the Secondary School Leaving Examination - Determinants for Boys & Girls  
Nele Nicole Kampa, Leibniz Institute for Science and Mathematics Education (IPN), Germany; Sonja Krämer, Leibniz-Institute for Science and Mathematics Education (IPN), Germany; Bettina Hannover, Freie Universität Berlin, Germany  
Academic self-concept and its relationship with students’ recovery after an achievement situation  
Sigrid Wimmer, University of Graz, Austria; Helmut Lackner, Medical University of Graz, Austria; Manuela Paechter, University of Graz, Austria; Ilona Papousek, University of Graz, Austria  
The structure of math anxiety revisited: Incorporating psychological dimensions and setting factors  
Sothe Henschel, Humboldt Universität zu Berlin, Germany; Thorsten Roick, Senate Administration for Education, Youth, and Science, Berlin, Germany, Germany  
Relationships between school belonging and various student outcomes: A meta-analytic review.  
Hanke Kerpershoek, University of Groningen, Netherlands; Esther Canrins, University of Agder, Norway; Marjon Fokkens-Bruinsma, University of Groningen, Netherlands; Hanke DeBoer, GION - University of Groningen, Netherlands |

### Session J: 7

**Time:** 15:45-17:15  
**Location:** Main Building A - A2A

**SINGLE PAPER: COMPREHENSION OF TEXT AND GRAPHICS**

| Chair | Different wording in multiple documents: Helpful or harmful for individual learning?  
Cornelia Schoor, University of Bamberg, Germany; Nadine Melzner, University of Bamberg, Germany; Cordula Areit, Bamberg University, Germany  
Identifying learner profiles in secondary school students’ text-learning strategy use  
Amélie Rogiers, Ghent University, Belgium; Emmelien Merchie, Ghent University, Belgium; Hilde Van Keer, Ghent University, Belgium  
Effects of domain-specific epistemic beliefs and prior attitudes on source rankings  
Saskia Brand-Grünewald, Open University of the Netherlands, Netherlands; Johan van Strien, Open University of the Netherlands, Netherlands; Sander Koovers, Fontys University of Applied Sciences, Netherlands  
Students analyzing multimodal meaning-making in digital videos  
Carina Kili, University of Oslo, Norway; Blaine Smith, University of Miami, United States; Miika Marttunen, University of Jyväskylä, Finland |

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**THURSDAY, 31 AUGUST 2017**
### Session J: 8 | Time: 15:45-17:15 | Location: Virta - 109

**SINGLE PAPER: HIGHER EDUCATION - D**

**Chair**
Claudia Krille, Goethe-Universität Frankfurt, Germany

**Identification of Teaching Needs for Mid-Career and Senior Professors in Higher Education**
Heather Kanuka, University of Alberta, Canada; Jason Holmes, The University of Alberta, Canada; Summer Cowley, The University of Alberta, Canada

**The development of self-efficacy and situational interest during a simulation of decision-making**
Dorothy Duchateau, University of Antwerp, Belgium; Pieter Spooren, University of Antwerp, Belgium; Peter Bursens, University of Antwerp, Belgium; Vincent Donche, University of Antwerp, Belgium; David Gijbels, University of Antwerp, Belgium

**PORT program: An initiative to enhance university teachers’ practice**
Sharon Herkes, University of Sydney, Australia; Hilary Lloyd, University of Sydney, Australia; Graham Hendry, University of Sydney, Australia; Manjula Sharma, University of Sydney, Australia; Vicky Tzioumis, University of Sydney, Australia; Helen Georgiou, University of Wollongong, Australia

**A study of academics’ perceptions of knowledge sharing on teaching and research**
Tracy Zou, The University of Hong Kong, Hong Kong

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### Session J: 9 | Time: 15:45-17:15 | Location: Main Building A - A3

**SINGLE PAPER: TEACHING AND TEACHER EDUCATION - C**

**Chair**
Dagmar Festner, University of Paderborn, Germany

**Stakeholders’ perceptions on in-service training in Mongolia**
Davaajav Purevjav, University of Szeged, Hungary; Edit Katalin Molnar, Szeged University, Hungary

**Spotlight on professional development: What kinds of teachers benefit most from a PD workshop?**
Michael Besser, Leuphana University of Lüneburg, Germany; Anna-Theresia Decker, Goethe-University Frankfurt, Germany; Dominik Leiss, Leuphana University of Lüneburg, Germany; Mareike Kunter, Goethe-Universität Frankfurt, Germany

**Measuring the Instructional Quality of Private Tutoring Lessons and its Effects on Students’ Grades**
Karin Guill, Leibniz Institute for Science and Mathematics Education, Germany; Oliver Lüdtke, Leibniz Institute for Science and Mathematics Education and Centre for International Student Assessment, Germany; Olaf Koehler, Leibniz Institute for Science and Mathematics Education, Germany

**Using learning journals for monitoring student learning processes in the context of video analysis**
Sandro Biaggi, Zurich University of Teacher Education, Switzerland; Kathrin Krammer, University of Teacher Education Lucerne, Switzerland; Isabelle Hugener, University of Teacher Education Lucerne (PH Luzern), Switzerland
### Session J: 10  
**Time: 15:45-17:15**  
**Location: Virta - 114**

#### SINGLE PAPER: COMPREHENSION OF TEXT AND GRAPHICS - C

**Chair**  
Charlotte Larmuseau, KU LEUVEN, Belgium

- **Impact of pacing and cognitive style on learning with dynamic and non-dynamic visualizations**  
  Marta Koč-Januchta, University of Duisburg-Essen, Germany; Tim Hoeflliger, Leibniz Institute for Science and Mathematics Education (IPN), Germany; Heimut Prechtl, Institut für Biochemie und Biologie, Germany; Detlev Leutner, University of Duisburg-Essen, Germany

- **Multimedia Learning in Children with Dyslexia**  
  Carolien A. N. Knoop-van Campen, Radboud University Nijmegen, Netherlands; Eliane Segers, Radboud University Nijmegen / University of Twente, Netherlands; Ludo Verhoeven, Radboud University Nijmegen, Netherlands

- **Prompting and Time of Testing in Learning with Animations Compared to Static Pictures**  
  Tim Kühl, University of Mannheim, Germany; Sabrina Navratil, University of Mannheim, Germany; Stefan Münzer, Universität Mannheim, Germany

- **Mixed camera angles viewpoints improve learning medical hand procedure from video in nurse training**  
  Jean-Michel Boucheix, University of Dijon, LEAD-CNRS, France; Perrine Gauthier, University of Dijon, LEAD-CNRS, France; Jean-Baptiste Fontaine, University of Dijon, LEAD-CNRS, France; Sandrine Jaffaux, IFSI Dijon, France

### Session J: 11  
**Time: 15:45-17:15**  
**Location: Main Building A - A05**

#### SINGLE PAPER: LEARNING AND DEVELOPMENT IN EARLY CHILDHOOD - C

**Chair**  
Susanne Lajoie, McGill University, Canada

- **Development of spatial reasoning in Chilean 2nd graders: effects of in-class intervention**  
  Carolina Araya, Pontificia Universidad Católica de Chile, Chile

- **Kindergarteners’ Reading Behaviors with Multimodal Digital Texts and Comprehension Outcomes**  
  X. Christine Wang, State University of New York at Buffalo, United States; Tanya Christ, Oakland University, United States

- **Using a robot in a dynamic testing setting: examining series completion performance**  
  Merel Bakker, KU Leuven - University of Leuven, Belgium; Wilma Resing, University of Leiden, Netherlands

- **Autonomy support and its associations with child individual characteristics and relational processes**  
  Marina Lemos, University of Porto, Portugal; Joana Cadima, University of Porto, Portugal; Tiago Ferreira, University of Porto, Portugal; Teresa Leal, University of Porto, Portugal; Karine Verschuere, KU Leuven, Belgium

**Annotations:**  
The presentation by X. Christine Wang (Kindergarteners’ reading behaviors with multimodal digital texts and comprehension outcomes) is cancelled.
## Session J: 12  
**Time:** 15:45-17:15  
**Location:** Main Building C - C8

### SINGLE PAPER: TEACHING AND TEACHER EDUCATION - D

<table>
<thead>
<tr>
<th>Chair</th>
<th>Session Title</th>
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</table>
| Ulrich Riegel, University of Siegen, Germany | Simulation-based self-regulation with real actors: A tool to foster teachers' professionalism  
Bracha Kramarski, Bar-Ilan University, Israel; Yafit Mordoff, Bar Ilan University, Israel |
| | Reading comprehension in socially and ethnically segregated classes: the role of teaching quality  
Lisa Dewulf, Ghent University, Belgium; Mieke Van Houtte, Ghent University, Belgium; Johan van Braak, Ghent University, Belgium |
| | Fostering professional digital competence as transformative agency in teacher education  
Andreas Lund, University of Oslo, Norway; Jon Magne Vestøl, University of Oslo, Norway |
| | The potential of disability arts and life stories in teacher professional development for inclusion  
Simoni Symeonidou, University of Cyprus, Cyprus |

## Session J: 13  
**Time:** 15:45-17:15  
**Location:** Main Building C - C5

### SINGLE PAPER: EDUCATIONAL EVALUATION

<table>
<thead>
<tr>
<th>Chair</th>
<th>Session Title</th>
</tr>
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</table>
| Deborah Pinho-Pasternak, Murdoch University, Australia | Discriminant validity in educational research: Problems and solutions  
Carla Bohndick, University of Koblenz-Landau, Germany; Frederic Hilkenmeier, HS Fresenius, Hamburg, Germany; Thomas Bohndick, Landau, Germany; Johanna Hilkenmeier, Hamburg, Germany |
| | Effectiveness of schools and teachers: can value added indicators inform us about this?  
Liliana Silva, University of Bologna, Italy; Alessandra Rosa, Alma Mater Studiorum Università di Bologna, Italy; Maria Lucia Giovannini, Alma Mater Studiorum Università di Bologna, Italy |
| | How retention affects students’ motivation: A longitudinal study over 3 years of secondary school  
Julia Kretschmann, University of Potsdam, Germany; Miriam Vock, Universität Potsdam, Germany; Oliver Lüdtke, Leibniz Institute for Science and Mathematics Education (IPN), Germany; Malte Jansen, German Institute for International Educational Research (DIPF), Germany; Anna Gronostaj, Die Deutsche Schulakademie, Germany |
| | School self-evaluation: does respondents’ motivation and item complexity predict missing item data?  
Jerich Faddar, University of Antwerp, Belgium; Jan Vanhoof, University of Antwerp, Belgium; Sven De Maeyer, University of Antwerp, Belgium |
### SINGLE PAPER: LEARNING AND TEACHING IN CULTURALLY DIVERSE SETTINGS

**Chair**
Susan Jones, University of Exeter, United Kingdom

**Promoting intercultural competence: Results from interventions and implications for teacher training**
Vera Busse, Carl von Ossietzky Universität Oldenburg, Germany; Ulrike-Marie Krause, University of Oldenburg, Germany

**Learning to read in a foreign language: A longitudinal study of children from immigrant families**
Cintia Ertel Silva, University of Luxembourg, Luxembourg; Ariana Loff, University of Luxembourg, FLHASE, Luxembourg; Pascale Engel de Abreu, University of Luxembourg, Luxembourg

**Does competent bilingualism entail advantages for the third language learning of immigrant students?**
Sebastian Kempert, University of Potsdam, Germany; Aileen Edele, Humboldt-University Berlin, Germany; Kristin Schotte, Humboldt-Universität zu Berlin, Germany

**Influences on Grade 3 students’ reading: first language intertwined with sociocultural aspects**
Katharina Maitz, University of Graz, Austria; Lisa Paleczek, University of Graz, Austria; Susanne Seifert, University of Graz, Germany; Barbara Gasteiger-Klicpera, University of Graz, Austria

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### SINGLE PAPER: HIGHER EDUCATION - G

**Chair**
Lennart Schalk, ETH Zurich, Switzerland

**Student-Faculty Relationships in Higher Education**
Ingrid Snijders, HZ University of Applied Sciences, Netherlands; Remigius (Remy) Rikers, UCR / Utrecht University, Netherlands; Lisette Wijnia, Erasmus University Rotterdam & University College Roosevelt, Netherlands; Sofie Loyens, University College Roosevelt, Netherlands

**Teaching portfolios and a competence framework aimed to build faculty teaching competencies**
Sofie Kobayashi, University of Copenhagen, Denmark; Jens Dolin, University of Copenhagen, Denmark

**Exploring the change in university students’ study-related exhaustion and regulation of learning**
Milla Räsänen, University of Helsinki, Finland; Liisa Postareff, University of Helsinki, Finland; Sari Lindblom, University of Helsinki, Finland

**Combining student learning research and learning analytics to understand students’ learning process**
Carlos González-Ugalde, Pontificia Universidad Católica de Chile, Chile; Maximiliano Montenegro, Facultad de Educación. Pontificia Universidad Católica de Chile, Chile; Carolina Guzmán-Valenzuela, University of Chile, Chile; Sergio Cejas, Facultad de Ciencias Físicas y Matemáticas. Universidad de Chile, Chile; Augusto Sandoval, Facultad de Ingeniería. Pontificia Universidad Católica de Chile, Chile; Dany López, Facultad de Educación. Pontificia Universidad Católica de Chile, Chile; Sergio Barrera, Facultad de Ciencias Físicas y Matemáticas. Universidad de Chile, Chile
### SINGLE PAPER: TEACHING AND TEACHER EDUCATION - E

**Chair**  
Giuseppe Ritella, University of Helsinki, Finland

**The Effects of Observational Learning in Teacher Education: a Meta-Analysis**  
Olga Chernikova, Ludwig Maximilian University, Germany; Karsten Stegmann, Ludwig-Maximilians-Universität (LMU), Germany; Jan-Willem Strijbos, University of Groningen, Netherlands

**Opportunities to analyze pupils’ learning at campus: A key challenge in teacher education?**  
Inga Staal Jenset, University of Oslo, Norway; Esther Carinrus, University of Agder, Norway; Kirsti Klette, University of Oslo, Norway; Karen Hammerness, American Museum of Natural History, United States

**Development of Environmental Citizenship and Leadership among Preschool Teachers**  
Ornit Spektor-Levy, Bar-Ilan University, Israel; Anat Abramovich, Technion-Israel Institute of Technology, Israel

**Competencies of pre-service primary school science teachers concerning formative assessment**  
Verena Zucker, University of Koblenz-Landau, Germany; Miriam Leuchter, University of Koblenz - Landau, Germany

### SINGLE PAPER: EDUCATIONAL EFFECTIVENESS

**Chair**  
Anna-Lisa Jögi, Tallinn University, Estonia

**Becoming Successful in Math - A Comparison Across European Countries**  
Jelena Radisic, University of Oslo, Norway; Marina Videnović, Institute of Psychology, Faculty of Philosophy, University of Belgrade, Serbia; Aleksander Baucau, University of Belgrade, Serbia

**Teacher self-efficacy in 32 OECD countries – teacher, classroom, principal and school effects**  
Sina Fackler, University of Oxford, United Kingdom; Lars-Erik Malmberg, University of Oxford, United Kingdom; Pamela Sammons, University of Oxford, United Kingdom

**Decomposing the score gap between immigrant and native students in Finland**  
Tanja Kirjavainen, National Audit Office of Finland, Finland; Jonna Pulkkinen, University of Jyväskylä, Finland

**The importance of pre-school and early learning for achievement. Findings from TIMSS 2015**  
Trude Nilsen, University of Oslo, Norway; Monica Melby-Lervåg, University of Oslo, Norway; Sigrid Blömeke, University of Oslo, Norway; Jan-Eric Gustafsson, University of Gothenburg, Sweden
### SINGLE PAPER: METHODS IN LEARNING RESEARCH

**Chair**
Marije Lesterhuis, University of Antwerp, Belgium

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Systems Approach to Model the Complex, Dynamic Nature of Policy into Practice</td>
<td>Pamela Paek, ACT, Inc., United States; Britte Cheng, SRI International, United States</td>
</tr>
<tr>
<td>The pattern of motivation and learning strategies in the East Asian countries from PISA 2012</td>
<td>Yi-Jhen Wu, University of Bamberg, Germany</td>
</tr>
<tr>
<td>A Machine Learning Approach to Explore the Role of Non-Academic Factors in Mathematics Literacy</td>
<td>Florence Gabriel, Flinders University, Australia; Jason Signolet, Data to Decisions CRC, Australia</td>
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<tr>
<td>Photo elicitation, observation and conversation in an ethnographic study of new learning spaces</td>
<td>Clare Newton, The University of Melbourne, Australia</td>
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### SINGLE PAPER: INSTRUCTIONAL DESIGN - A

**Chair**
Stefanie Rach, University of Paderborn, Germany

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td>If you could see what I see: professional and interdisciplinary challenges in learning space design</td>
<td>Pippa Yeoman, University of Sydney, Australia; Megan Phelps, University of Sydney, Australia</td>
</tr>
<tr>
<td>Achievement emotions in multimedia learning: An application of Control-Value Theory</td>
<td>Lisa Stark, Saarland University, Germany; Babette Park, Saarland University, Germany; Roland Bruenken, Saarland University, Germany</td>
</tr>
<tr>
<td>Effects of text mining based grouping and representing on collaborative learning</td>
<td>Melanie Erkens, University of Duisburg-Essen, Germany; Daniel Bodemer, University of Duisburg-Essen, Germany</td>
</tr>
<tr>
<td>Effects of a preparation to learn design for primary school children: Does one design fit all?</td>
<td>Rachel Lam, ETH Zurich, Switzerland; Stephanie Herppich, University of Freiburg, Germany</td>
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**THURSDAY, 31 AUGUST 2017**

140
### Session J: 20
**Time:** 15:45-17:15  
**Location:** Main Building A - A4

**SINGLE PAPER: MOTIVATION AND EMOTION - E**

| Chair | Motivation to enrol in doctoral education: the case of part-time traditional doctoral education  
Mindel van de Laar, Maastricht University, Netherlands; Nathan Kably, Maastricht University, France; Carlos Cadena Gaitan, UNU-MERIT, Netherlands  
Self-regulated learning skill development differences in grade 5-8 Australian students  
Susan-Marie Harding, The University of Melbourne, Australia; Narelle English, The University of Melbourne, Australia; Nives Nibali, The University of Melbourne, Australia; BM Alom, The University of Melbourne, Australia; Lorraine Graham, The University of Melbourne, Australia; Patrick Griffin, The University of Melbourne, Australia  
The effects of a partner reading intervention on self-efficacy and motivation among L2 learners  
Hanna Pöyllö, Niilo Mäki Institute, Finland; Annastìnä Kettunen, Niilo Mäki Institute, Finland; Katja Korhonen, Niilo Mäki Institute, Finland; Adrienn Jalonen, Niilo Mäki Institute, Finland  
Predicting Creativity in high school students through difficulties in Emotion Regulation  
Maryam Esmaeilinasab, Tarbiat Modares University, Iran; Alireza Moradi, Kharazmi University, Iran; Susan Salehi, Islamic Azad University, Iran |
|---|

### Session J: 21
**Time:** 15:45-17:15  
**Location:** Pinni B - B3107

**SINGLE PAPER: MOTIVATION AND EMOTION - F**

| Chair | Involving Parents in High School Math through Short Text Messages (SMS)  
Miguel Nussbaum, Pontificia Universidad Católica de Chile, Chile; Macarena Santana, Pontificia Universidad Católica de Chile, Chile  
Students' well-being in innovative schools – individual, social, and school factors  
Michaela Glaeser-Zikuda, University of Erlangen-Nuremberg, Germany; Florian Hofmann, University of Erlangen-Nuremberg; Institute for Educational Science, Germany; Melanie Bonitz, University of Erlangen-Nuremberg; Institute for Educational Science, Germany; Nikoletta Lippert, University of Erlangen-Nuremberg; Institute of Educational Science, Germany  
School-based interventions on motivation in secondary education: A study of the longitudinal effects  
Arnout Prince, Inholland University of Applied Sciences, Netherlands; Alexander Minnaert, University of Groningen, Netherlands; Marie-Christine Ondenack, University of Groningen, Netherlands  
Test anxiety in secondary education: development and effects of learning environment characteristics  
Marie-Christine Ondenack, University of Groningen, Netherlands |

**ANNOTATIONS:**  
THIS SESSION IS CHAIRMED BY VALENTINA CARUSO. LADISLAO SALMERON WILL CHAIR SESSION R: 8.
SINGLE PAPER: METACOGNITION - E

**Chair**
Christian Müller, Goethe-University Frankfurt, Germany

**Which glasses do you wear? The relation between adaptability and epistemological beliefs in science**
Ronny Scherer, University of Oslo, Norway; Øystein Guttersrud, The Norwegian Centre for Science Education, Norway

**Using implementation intentions to support self-regulation in multimedia learning**
Emely Hoch, Leibniz-Institut für Wissensmedien, Germany; Katharina Scheiter, Leibniz-Institut für Wissensmedien, Germany; Anne Schueler, Leibniz-Institut für Wissensmedien, Germany

**Learning from problem-solving tasks: Effects of prior knowledge and degree of control**
Loredana Mihalca, Webster University Geneva, Switzerland; Christoph Mengelkamp, University of Würzburg, Germany

**Help-seeking assistance in ILE: effect on perceptions of help and use of learning aids**
Nathalie Huet, University of Toulouse, France; Julie Mulet, Université Toulouse Jean-Jaurès, France; Jean-Christophe Sakdavong, Université Toulouse Jean-Jaurès, France

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SINGLE PAPER: TEACHING AND TEACHER EDUCATION - M

**Chair**
Sanne van der Ven, Utrecht University, Netherlands

**A Salutogenic View of Teacher Attrition: Career Stories of Teachers who Left Teaching**
Hayuta Yiron, Oranim Academic College of Education, Israel; Lily Orland-Barak, University of Haifa, Israel

**Student surveys as measures of instructional quality**
Marte Blikstad-Balas, University of Oslo, Norway; Kirsti Klette, University of Oslo, Norway; Astrid Roe, University of Oslo, Faculty of Education, Norway

**Impacts of teachers’ expectation on student achievement**
Lena Hollenstein, University of Teacher Education St.Gallen, Switzerland; Benita Affolter, University of Teacher Education St.Gallen, Switzerland; Christian Bruehwiler, University of Teacher Education St.Gallen, Switzerland

**Differentiated instruction as philosophy and teaching approach: introducing the Di-QUEST instrument**
Katrien Struyven, Vrije Universiteit Brussel, Belgium; Catherine Coubergs, Vrije Universiteit Brussel (VUB), Belgium; Júlia Grifol Freixenet, Vrije Universiteit Brussel (VUB), Belgium; Esther Gheyssens, Vrije Universiteit Brussel (VUB), Belgium

**Annotations:**
This session will be chaired by Joanna Tai, replacing Sanne van der Ven.
### Session J: 24  
**Time:** 15:45-17:15  
**Location:** Pinni B - B0039

#### SINGLE PAPER: ONLINE MEASURES OF LEARNING PROCESSES

<table>
<thead>
<tr>
<th>Chair</th>
<th>Topic</th>
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</table>
| Kerstin Helker, RWTH Aachen University, Germany | **A computer-based assessment tool for early identification of children with maths difficulties**  
Moritz Herzog, University of Duisburg-Essen, Germany; Antje Ehlert, University of Potsdam / University of Johannesburg, Germany; Annemarie Fritz-Stratmann, University of Duisburg-Essen, Germany |
|       | **Identifying early difficulties in mathematics: eDia, the online diagnostic assessment tool**  
Gyöngyver Molnár, University of Szeged, Hungary; Benő Csapó, University of Szeged, Hungary |
|       | **A mathematical screening for measuring basic skills in 5th and 6th grade**  
Antje Ehlert, University of Potsdam / University of Johannesburg, Germany; Annemarie Fritz-Stratmann, University of Duisburg-Essen, Germany |
|       | **CODY: A computer-based screening for mathematical learning disabilities in elementary school**  
Joerg-Tobias Kuhn, University of Münster, Germany; Christin Schwenk, University of Münster, Germany; Julia Raddatz, University of Münster, Germany; Christian Dobel, University of Jena, Germany; Heinz Holling, University of Münster, Germany |

**ANNOTATIONS:**  
**IMPORTANT NOTICE:** THIS SESSION WILL TAKE PLACE IN ROOM PINNI B - B4115.

### Session J: 25  
**Time:** 15:45-17:15  
**Location:** Main Building E - E221

#### SINGLE PAPER: ARGUMENTATION

<table>
<thead>
<tr>
<th>Chair</th>
<th>Topic</th>
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| Maria Tulis, University of Augsburg, Austria | **The use of argument organiser in outlining physics content knowledge for teaching purposes**  
Maija Nousiainen, University of Helsinki, Finland |
|       | **The role of peer feedback script on students argumentative essay writing and knowledge acquisition**  
Omid Noroozi, Tarbiat Modares University, Iran; Javad Hatami, Tarbiat Modares University, Iran |
|       | **Enhancing dialogic argumentation in teacher-orchestrated discussions in mathematics and physics**  
Sami Lehervuori, University of Jyväskylä, Finland; Jenni Hiltunen, University of Jyväskylä, Finland; Markus Hākkinen, University of Jyväskylä, Finland; Kaisa Jokiranta, University of Jyväskylä, Finland; Pasi Nieminen, University of Jyväskylä, Finland; Jouni Yliki, University of Jyväskylä, Finland |
|       | **Online written argumentation: Developmental features and classroom instruction**  
Stuart McNaughton, University of Auckland, New Zealand; Naomi Rosedale, University of Auckland, New Zealand; Rebecca Jesson, University of Auckland, New Zealand |

**ANNOTATIONS:**  
THE PRESENTATION BY OMID NOOROOZI (THE ROLE OF PEER FEEDBACK SCRIPT ON STUDENTS ARGUMENTATIVE ESSAY WRITING AND KNOWLEDGE ACQUISITION) IS CANCELLED.
**Session J: 26** | **Time: 15:45-17:15** | **Location: Pinni B - B1097**
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**SYMPOSIUM: STUDENTS’ PERCEPTIONS OF TEACHING QUALITY: CORE PREDICTORS AND EFFECTS**

**Chair**  
Jennifer Igler, TU Dortmund University, Germany

**Discussant**  
Anna-Katharina Praetorius, German Institute for International Educational Research (DIPF), Germany

Variation in teaching quality ratings of the same teacher in different classes  
Benjamin Caspar Fauth, University of Tübingen, Germany; Christiane Bertram, University of Tübingen, Germany; Wolfgang Wagner, University Tuebingen, Germany; Ulrich Trautwein, University of Tübingen, Germany

Individual predictors for students’ perceptions of teaching quality  
Jennifer Igler, TU Dortmund University, Germany; Annika Ohle, TU Dortmund, Germany; Nele McElvany, TU Dortmund University, Germany

Classroom goal structure and teacher support: Relations with emotional and motivational responses  
Einar Skaalvik, Norwegian Univ. of Science and Technology, Norway

Interpersonal Characteristics of Teaching and Students’ Achievement Goals  
Tim Mainhard, Utrecht University, Netherlands; Theo Wubbels, Utrecht University, Netherlands

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**Session J: 27** | **Time: 15:45-17:15** | **Location: Linna - Väinö Linna (K104)**
---|---|---
**INVITED SYMPOSIUM: MORE = MORE? METHODOLOGICAL CHALLENGES OF PROCESS MEASURES**

**Chair**  
Ellen Kok, Utrecht University, Netherlands

**Organisers**  
Halszka Maria Jarodzka, Open University of the Netherlands, Netherlands; Ladislao Salmeron, University of Valencia, Spain

**Discussant**  
Els Boshuizen, Open University of the Netherlands, Netherlands

Investigating “looking ahead” during music reading: Rethinks and realizations  
Marjaana Puurtinen, University of Turku, Finland

Measuring motivation and emotion regulation on-line  
Hanna Jarvenoja, University of Oulu, Finland; Sanna Järvelä, University of Oulu, Finland; Jonna Malmberg, University of Oulu, Finland; Kristiina Kurki, University of Oulu, Finland

Using Event Sequence Analysis to Uncover Self-Regulatory Behaviour: Towards Design Guidelines  
Jan Elen, KU Leuven, Belgium; Stijn Van Laer, KU Leuven, Belgium

Combining eye-tracking with EEG data analysis: Potentials and methodological challenges  
Christian Scharinger, Leibniz-Institut für Wissensmedien, Germany
### INVITED SYMPOSIUM: BROADENING THE SCOPE OF CONCEPTUAL CHANGE: CONCEPTUAL CHANGE MEETS OTHER DISCIPLINES

<table>
<thead>
<tr>
<th>Chair</th>
<th>Conceptual change within the individual collective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haim Eshach, Ben-Gurion University of the Negev, Israel</td>
<td>Haim Eshach, Ben-Gurion University of the Negev, Israel</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Organisers</th>
<th>Conceptual change and threshold concepts in economics: learning to see like an economist?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Konstantinos Christou, University of Western Macedonia, Greece; Haim Eshach, Ben-Gurion University of the Negev, Israel</td>
<td>Peter Davies, University of Birmingham, United Kingdom</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>Discussant</th>
<th>Conceptual change research in mathematics: Looking back and looking forward</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stella Vosniadou, National and Kapodistrian University of Athens / Flinders University of Australia, Greece</td>
<td>Xenia Vamvakoussi, University of Ioannina, Greece</td>
</tr>
</tbody>
</table>

| | Dual Processes theory implications for conceptual change: A review  |
| | Margarita Limon, Autonomous University of Madrid, Spain |
### Session J: 29

**Time:** 15:45-17:15  
**Location:** Main Building D – D10B

### SINGLE PAPER: TEACHING AND TEACHER EDUCATION - U

| Chair | Mathematics Teachers' Attitudes Towards Homework and their Comparison to Science Teachers' attitudes  
Ida Kukliansky, Ruppin Academic Center, Israel; Haim Eshach, Ben Gurion University of the Negev, Israel  

Psychometric properties of a Swedish instrument measuring pedagogical leadership – a Rasch analysis  
Lisa Hellström, Malmö University, Sweden  

Effects of Structured Briefs: An Extended Replication  
Christof Wecker, Ludwig-Maximilians-Universität (LMU), Germany; Katharina Engelmann, Ludwig-Maximilians-Universität (LMU), Germany; Andreas Hetmanek, Technical University of Munich, Germany  

Stories of student teachers about their practice: a learning tool for students and teacher educators  
Ietje Pauw, Katholieke Pabo Zwolle, Netherlands; Wencje Jongstra, Katholieke Pabo Zwolle, Netherlands |

Chair  
Janna Teltemann, University of Hildesheim, Germany
SINGLE PAPER: INQUIRY LEARNING

Chair
Stuart Karabenick, University of Michigan, United States

Change of epistemological beliefs through authentic science experiences
Joerg Zumbach, University of Salzburg, Austria; Stephanie Moser, Technical University of Munich, Germany; Teresa Stemeseder, University of Salzburg, Austria; Gabriele Gadermaier, University of Salzburg, Austria; Martin Himly, University of Salzburg, Austria

Using causal diagrams to foster systems thinking in geography education
Marjolein Cox, KU Leuven, Belgium; An Steegen, KU Leuven, Belgium; Jan Elen, KU LEUVEN, Belgium

Metacognitive Support in Simulation-Based Physics Instruction
Ines Deibl, University of Salzburg, Austria; Stephanie Moser, Technical University of Munich, Germany; Joerg Zumbach, University of Salzburg, Austria

Model-based reasoning in science education, assigning causality in drawing-based modeling
Wouter R. van Joolingen, Utrecht University, Netherlands
<table>
<thead>
<tr>
<th>Session J: 31</th>
<th>Time: 15:45-17:15</th>
<th>Location: Main Building A – A2B</th>
</tr>
</thead>
</table>

**SINGLE PAPER: LIFELONG LEARNING**

**Chair**
Beatriz Vargas Dorneles, Federal University of Rio Grande do Sul – UFRGS, Brazil

**Seeing the invisible: editing wikipedia for the public good**
Allison Littlejohn, Open University, United Kingdom; Nina Hood, University of Auckland, Faculty of Education, New Zealand; Martin Rehm, University of Duisburg-Essen, Germany; Bart Rienties, Open University, United Kingdom

**Entrepreneurial Competencies of Established Women Entrepreneurs in Germany and Ireland**
Kaethe Schneider, Friedrich Schiller University Jena, Germany

**Determinants of a corporate culture for lifelong competence development**
Bernd Gössling, University of Osnabrück, Germany

**Adjusting Skill Learning Protocols to Aid Learning in Developmental Disorders.**
Esther Adi-Japha, Bar-Ilan University, Israel
<table>
<thead>
<tr>
<th>Session K: 1</th>
<th>Time: 08:30-10:00</th>
<th>Location: Pinni A - A1081</th>
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<tbody>
<tr>
<td><strong>SINGLE PAPER: TEACHING AND PRE-SERVICE TEACHER EDUCATION</strong></td>
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<tr>
<td><strong>Chair</strong></td>
<td>Andreas Gegenfurtner, Germany</td>
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<tr>
<td><strong>Teachers and students reciprocal relations in promoting self-regulation and math performance</strong></td>
<td>Bracha Kramarski, Bar-Ilan University, Israel; Anat Shilo1, Bar Ilan University, Israel</td>
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<tr>
<td><strong>The role of teachers’ diversity perception for teacher-student interactions</strong></td>
<td>Maralena Pielmeier, Technical University of Munich (TUM), Germany; sina huber, TUM School of Education/ZIB, Germany; Tina Seidel, Technische Universität München (TUM), Germany</td>
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<tr>
<td><strong>Fostering Students’ Professional Vision on Theological Discussions by Lesson Clips</strong></td>
<td>Ulrich Riegel, University of Siegen, Germany</td>
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<tr>
<th>Session K: 2</th>
<th>Time: 08:30-10:00</th>
<th>Location: Main Building D - D13</th>
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<tbody>
<tr>
<td><strong>SINGLE PAPER: PROFESSIONAL DEVELOPMENT</strong></td>
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<tr>
<td><strong>Chair</strong></td>
<td>Claudia Roebers, University of Bern, Switzerland</td>
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<tr>
<td><strong>The influence of students learning experiences on learning results in complex learning environments</strong></td>
<td>Mandy Hommel, TU Dresden, Germany</td>
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<tr>
<td><strong>The Role of Beliefs and Motivational Variables in Enhancing Word Problem Solving</strong></td>
<td>Nonmanul Pongsakdi, University of Turku, Finland; Eero Laakkonen, University of Turku, Finland; Teija Laine, Centre for Teacher Training, Turku, Finland; Koen Veermans, University of Turku, Finland; Minna Hannula-Sormunen, University of Turku, Finland; Erno Lehtinen, University of Turku, Finland</td>
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<tr>
<td><strong>Learning in in the Icelandic dual VET system: Integration of school and work-based learning</strong></td>
<td>Elsa Eiriksdottir, University of Iceland, Iceland</td>
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<tr>
<td><strong>Comparing trainees’ competences in the technical domain between Germany and Switzerland</strong></td>
<td>Leo van Waveren, Technical University of Kaiserslautern, Germany</td>
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</tr>
</tbody>
</table>
### SINGLE PAPER: SOCIAL INTERACTION IN LEARNING AND INSTRUCTION - B

**Chair**  
Anne-Mari Kuusimaki, University of Helsinki, Finland

#### Challenges and learning potentials at the boundary: Encounters of educational research and practice
Ulrike Hartmann, University of Wuppertal, Germany; Jasmin Decristan, Goethe-University Frankfurt; IDEA-Research Center, Germany

#### Effects of Parental and Teachers’ Positive Feedback on their Children’s Reading Motivation
Frank Hellmich, Paderborn University, Germany; Fabian Hoya, Paderborn University, Germany

#### Effects of teacher training to reduce pupil inattention and hyperactivity in elementary classroom
Markus P. Neuenschwander, University of Applied Sciences and Arts Northwestern Switzerland, Switzerland; Sara Beninii, Scuola Universitaria Professionale della Svizzera Italiana, Switzerland; Jennifer C. Fräulín, University of Applied Sciences and Arts Northwestern Switzerland, Switzerland

#### Nonviolent Communication and dealing with classroom conflicts: a qualitative study
Markus Dormann, Otto-Friedrich-Universität Bamberg, Germany; Eveline Wittmann, TUM School of Education, Germany

**ANNOTATIONS:**  
The presentation by Markus Dormann (Nonviolent Communication and Dealing with Classroom Conflicts: A Qualitative Study) is cancelled and replaced by Ylva Wintner (Dis/Enabling Technologies for Learning in Higher Education-For-All. Issues and Challenges for Whom?).

### SINGLE PAPER: EARLY CHILDHOOD EDUCATION

**Chair**  
Lina Markauskaite, University of Sydney, Australia

#### Linking Personal Qualities to Socioeconomic Differences in Early Language Competences
Tobias Linberg, Leibniz Institute for Educational Trajectories (LIfBi), Germany

#### Preschool self-evaluation in Italy: a theoretical framework
Cristina Stringher, Istituto Nazionale per la Valutazione del Sistema Educativo di Istruzione e di Formazione (INVALSI), Italy

#### Challenges in measuring growth in early reading development in two transparent orthographies
Oddny Judith Solheim, The Norwegian Reading Centre, Norway; Per Henning Uppstad, Centre for Reading Education and Research, Norway; Marja-Kristiina Lerkanen, University of Jyväskylä, Finland

#### Early numerical skills and special needs: A new instrument for 2- to 4½-year-old children
Simeon Schaub, University of Applied Sciences of Special Needs Education, Switzerland; Kerstin Olsheusen Urech, Service for Early Education, Berne, Switzerland; Christina Koch, University of Applied Sciences of Special Needs Education, Switzerland; Martin Venetz, University of Applied Sciences of Special Needs Education, Switzerland

**ANNOTATIONS:**  
The presentation by Oddny Judith Solheim (Challenges in Measuring Growth in Early Reading Development in Two Transparent Orthographies) is moved to Session G: 15, and replaced by Paul Ayres (The Role of Gender and Spatial Ability in Enhancing Static Pictures with Embodied Cognition).
### Session K: 5  |  Time: 08:30-10:00  |  Location: Main Building D - D10B

#### SINGLE PAPER: HIGHER EDUCATION - E

**Chair**  
Liesje Coertjens, Université catholique de Louvain (UCL), Belgium

**Teaching Academic Knowledge by Coordinating Conventions**  
Caroline Dahlberg, Stockholm University, Sweden

**Understanding the factors affecting the use of Learning Analytics in the UK Higher Education Sector**  
Claudette Kika, University of Bedfordshire, United Kingdom; Yanqing Duan, University of Bedfordshire, United Kingdom; Guangming Cao, University of Bedfordshire, United Kingdom

**Processing of a Patient Case Among Medical Students and Residents – an eye-movement study**  
Ilona Södervik (née Ahopetel), University of Turku, Finland; Henna Vilppu, University of Turku, Finland; Erika Österholm, University of Turku, Finland; Mirjamaja Mikkila-Erdmann, University of Turku, Finland

**The Impact of Stress on Well-being among Faculty Members: Moderating Role of Emotion Regulation**  
Alenoush Saroyan, McGill University, Canada; Nathan Hall, McGill University, Canada; Raheleh Salimzadeh, McGill University, Canada

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### Session K: 6  |  Time: 08:30-10:00  |  Location: Pinni B - B3107

#### SINGLE PAPER: COMPREHENSION OF TEXT AND GRAPHICS - D

**Chair**  
Christine Schmid, German Institute for International Educational Research (DIPF), Germany

**The influence of perceptual cues in attributing importance in argument diagrams**  
Marije van Amelsvoort, Tilburg University, Netherlands; Joost Schliperoord, Tilburg University, Netherlands

**Format effects on the comprehension of movement from static graphics in engineering education**  
Olga Kasatkina, Université Grenoble Alpes, France; Erica de Vries, Université Grenoble Alpes, France; Jean-François Boujut, Univ. Grenoble Alpes, France; Cédric Masclet, Univ. Grenoble Alpes, France

**Multi-Level Mental Representations of Written, Auditory, and Audiovisual Text in Children and Adults**  
Wienke Wannagat, University of Würzburg, Germany; Gesine Waizenegger, University of Würzburg, Germany; Gerhild Nieding, University of Würzburg, Germany

**Effects of (supported) drawing on self-regulated learning**  
Julia Kollmer, University of Freiburg, Germany; Alexander Eitel, University of Freiburg, Germany; Katrin Schleinschok, Leibniz-Institut für Wissensmedien, Germany; Katharina Scheiter, Leibniz-Institut für Wissensmedien (IWM), Germany
### Session K: 7
**Time:** 08:30-10:00  
**Location:** Virta - 109

**SINGLE PAPER: LIFELONG LEARNING AND OUT-OF-SCHOOL LEARNING**

<table>
<thead>
<tr>
<th>Chair</th>
<th>The role of social informal learning in the student/graduate entrepreneurs’ entrepreneurial process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laura Hirsto, University of Eastern Finland, Finland</td>
<td>Carla Quesada-Pallarès, Universitat de Manresa, Spain; Nigel Lockett, Lancaster University, United Kingdom; Antonio Padilla-Meléndez, Universidad de Malaga, Spain; Karen Williams-Middleton, Chalmers University of Technology, Sweden; Sarah Jack, Lancaster University, United Kingdom</td>
</tr>
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<thead>
<tr>
<th>Teacher Leadership and Professional Development in Challenging Contexts</th>
<th>Maria A. Flores, University of Minho, Portugal</th>
</tr>
</thead>
</table>

| Self-regulated professional learning in the workplace: a state of the art and future perspectives | Katrien Cuypers, University of Antwerp, Belgium; Piet Van den Bossche, University of Antwerp, Belgium; Vincent Donche, University of Antwerp, Belgium |

| Exploring use of wearable technologies to study engagement, interest and learning in Makerspaces | Victor Lee, Utah State University, United States |

### Session K: 8
**Time:** 08:30-10:00  
**Location:** Main Building C - C8

**SINGLE PAPER: COMPREHENSION OF TEXT AND GRAPHICS - E**

<table>
<thead>
<tr>
<th>Chair</th>
<th>Visual Representations in a High School Ecology Textbook: Promoting Representational Abilities</th>
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<tbody>
<tr>
<td>Sarah Strauß, University of Cologne, Germany</td>
<td>Billie Eilam, University of Haifa, Israel; Ilana Sinai, University of Haifa, Israel, Israel</td>
</tr>
</tbody>
</table>

| More efficacious representations? Examining the effect of diagrams in students’ written explanations | Emmanuel Manalo, Kyoto University, Japan; Rachel Dryer, Charles Sturt University, Australia; Ayano Tsuda, Kyoto University, Japan |

| Modeling online research and comprehension: What skills are critical when reading on the Internet? | Laura Kanniainen, University of Jyväskylä, Finland; Carita Kilii, University of Oslo, Norway; Donald J. Leu, University of Connecticut, United States; Jukka Utiaiinen, University of Jyväskylä, Finland; Kaisa Lohvansuu, University of Jyväskylä, Finland; Asko Tolvanen, University of Jyväskylä, Finland; Paavo H.T. Leppänen, University of Jyväskylä, Finland |

| Effectiveness of reading strategy interventions in classrooms: A meta-analysis. | Mariska Okkina, Rotterdam University of Applied Sciences, Netherlands; Roel van Steensel, Erasmus University Rotterdam, Netherlands; Amos van Gelderen, University of Amsterdam / Rotterdam University of Applied Sciences, Netherlands; Lidia Arends, Erasmus University Rotterdam, Netherlands; Erik van Schooten, Hogeschool Rotterdam, Rotterdam University, Netherlands; Peter Sieegers, Twente University, Netherlands |
### Session K: 9  
**Time:** 08:30-10:00  
**Location:** Pinni B - B3116

#### SINGLE PAPER: LEARNING AND INSTRUCTION WITH COMPUTERS - B

**Chair**  
Margje W.J. van de Wiel, Maastricht University, Netherlands

**Decorative pictures – the good, the bad, and the ugly**  
Sascha Schneider, Chemnitz University of Technology, Germany; Maik Beege, Chemnitz University of Technology, Germany; Steve Nebel, Chemnitz University of Technology, Germany; Günter Daniel Rey, Chemnitz University of Technology, Germany

**Computer-Based Simulations or Material-Based Experiments - Which Way to Foster Functional Thinking?**  
Michaela Scheuring, University of Koblenz-Landau, Germany; Jürgen Roth, University of Koblenz-Landau, Germany

**The effects of learning analytics empowered technology on the students’ arithmetic skills learning**  
Carolien A. N. Knoop-van Campen, Radboud University Nijmegen, Netherlands; Inge Molenaar, Radboud University Nijmegen, Netherlands; Fred Hasselman, Radboud University Nijmegen, Netherlands

**Investigating student interest in blending learning: Chatbot or human learning partner preferences?**  
Andrew Thompson, Kyushu Sangyo University, Japan; Luke Fryer, The University of Hong Kong, Hong Kong; Kaori Nakao, Kyushu Sangyo University, Japan; Aaron Gibson, Kyushu Sangyo University, Japan; Zelinda Sherlock, Kyushu Sangyo University, Japan

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### Session K: 10  
**Time:** 08:30-10:00  
**Location:** Main Building D - D11

#### SINGLE PAPER: HIGHER EDUCATION - J

**Chair**  
Mariel Musso, Argentina

**Factors explaining learning of generic skills: A study of university students’ experiences**  
Anne Virtanen, University of Jyväskylä, Finland; Päivi Tynjälä, University of Jyväskylä, Finland

**Integrating PRME into an undergraduate curriculum – experiences from a Swiss University**  
Taiga Brahm, University of Tübingen, Germany; Patrizia Kuehner, University of St.Gallen, Switzerland

**How successful are first-year university students? A multi-perspective approach**  
Paulien Meijer, Radboud University Nijmegen, Netherlands; Petrie van der Zanden, Behavioural Science Institute & Radboud Teachers Academy, Radboud University, Netherlands; Eddie Denessen, Behavioural Science Institute, Radboud University, Netherlands; Toon Cillessen, Behavioural Science Institute, Radboud University, Netherlands

**Training and assessment of communication skills**  
Edith Braun, University of Kassel, Germany; Georgios Athanassiou, University of Kassel, Greece; Ulrike Schwabe, Universität Kassel, Germany
### Session K: 11  
**Time:** 08:30-10:00  
**Location:** Main Building A - A2B

#### SINGLE PAPER: WRITING

**Chair**  
Merja Kuirma, University of Tampere, Finland

**Effects of different learning activities on different synthesis writing outcomes**  
Mar Mateos, Universidad Autónoma de Madrid, Spain; Ruth Villalon, University of Cantabria, Spain; Elena Martin, Universidad Autonoma de Madrid, Spain; Isabel Cuevas, Autonoma University of Madrid, Spain; Marianita Solari, Universidad Autonoma de Madrid, Spain; Gert Rijlaarsdam, University of Amsterdam, Netherlands

**Effects of peer observation in strategy instruction on synthesizing skills in teaching EFL writing**  
Elke Van Steendam, KU Leuven, Belgium; Muqan Buyuktas Kara, University of Amsterdam, Turkey; Gert Rijlaarsdam, University of Amsterdam, Netherlands

**Writing synthesis texts: Effects of think-aloud on students’ short argumentation essays**  
Christian Tarchi, University of Florence, Italy

**Learning to write a synthesis text: Effects of instructional method and reflection**  
Janneke van der Loo, Tilburg University, Netherlands; Emiel Krahmer, Tilburg University, Netherlands; Marije van Amelsvoort, Tilburg University, Netherlands

### Session K: 12  
**Time:** 08:30-10:00  
**Location:** Virta - 120

#### SINGLE PAPER: HIGHER EDUCATION - K

**Chair**  
Helma Oolbekkink-Marchand, Radboud University Nijmegen, Netherlands

**“At uni, regulate your feelings wisely” -- Students’ emotion regulation and approaches to learning**  
Robert Kordts-Freudinger, Paderborn University, Germany; Thomas Grosse Honebrink, Paderborn University, Germany; Dagmar Festner, University of Paderborn, Germany

**How do the different study profiles of first-year students predict their completion of degrees?**  
Anne Haarala-Muhonen, University of Helsinki, Finland; Mirja Ruohonиемi, University of Helsinki, Finland; Anna Parpala, University of Helsinki, Finland; Erkki Komulainen, University of Helsinki, Finland; Sari Lindblom-Ylänne, University of Helsinki, Finland

**Transitions in Research Postgraduate Students’ Teaching and Learning Profiles in a Training Course**  
Alex Shum, The University of Hong Kong, Hong Kong; Luke Fryer, The University of Hong Kong, Hong Kong

**Fostering University students’ evaluation of information sources: A classroom intervention study.**  
Jean-Francois Rouet, University of Poitiers, France; Benjamin Bordas, University of Poitiers, France; Nicolas Vibert, University of Poitiers, France
### Session K: 13
**Time:** 08:30-10:00  
**Location:** Main Building A - A32

#### SINGLE PAPER: TEACHING AND TEACHER EDUCATION - O

**Chair**  
Teresa Guasch, Open University of Catalonia (UOC), Spain

“I like the talk!!”: Collaborative rounds for teacher professional learning in Australia  
Caroline Mansfield, Murdoch University, Australia; Greg Thompson, Queensland University of Technology (QUT), Australia

The development process of a coding protocol for understanding teacher learning in Lesson Study  
Paul Warwick, University of Cambridge, United Kingdom; Maria Vriki, University of Cambridge, United Kingdom; Jan Vermunt, University of Cambridge, United Kingdom; Neil Mercer, University of Cambridge, United Kingdom

Peer Coaching moves of student teachers in lesson planning dialogues – an intervention study  
Annelies Kreis, Zurich University of Teacher Education, Switzerland; Stefanie Schnebel, University of Tübingen, Germany

What pre-service teachers talk about in peer lesson dialogues, and how this can be influenced  
Stefanie Schnebel, University of Tübingen, Germany; Annelies Kreis, Zurich University of Teacher Education, Switzerland

**ANNOTATIONS:**  
The presentation by Caroline Mansfield (“I like the talk!!”: Collaborative rounds for teacher professional learning in Australia) is cancelled and replaced by the presentation by Martin Kerby (Art and Soul: upholding the human right to education and cultural participation).

**THIS SESSION IS CHAired BY SARAH K. HOWARD, REPLACING TERESA GUASCH.**

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### Session K: 14
**Time:** 08:30-10:00  
**Location:** Linna - K103

#### SINGLE PAPER: MOTIVATION AND EDUCATIONAL PSYCHOLOGY

**Chair**  
Manuela Paechter, University of Graz, Austria

Do Purpose in Life, Social Support and Digital Use Contribute to Adolescents’ Life Satisfaction?  
Ina Blau, Open University of Israel, Israel; Shira Goldberg, the Open University of Israel, Israel; Nurit Benoliel, Beit Berl Academic College, Israel

Understanding gender differences in motivation at school: a latent-variable approach  
Natalie Vannini, Goethe-Universität Frankfurt, Germany; Barbara Otto, Ludwigsburg University of Education, Germany; Tanja Kön, Goethe-Universität Frankfurt, Germany

Relationships between achievement goals and epistemic beliefs: developmental trends over grades 5-11  
Anders Holverberg, Umeå University, Sweden; Mikael Winberg, Umeå University, Sweden

Potential and Limits of Online Self-Assessments: Effects on Study Choice Certainty and Self-Efficacy  
Fari Lauermann, University of Bonn, Germany; Marold Wosnitza, RWTH Aachen University, Germany; Stuart Karabenick, University of Michigan, United States; Katharina Zay, RWTH Aachen University, Germany

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### SINGLE PAPER: ARGUMENTATION AND REASONING

**Chair**
Steffen Schmidgall, Leibniz-Institut für Wissensmedien, Germany

**Using refutational text for the remediation of an incorrect intuition**
Stephanie Lem, KU Leuven, Belgium; Patrick Onghena, KU LEUVEN, Belgium; Lieven Verschaffel, KU LEUVEN, Belgium; Wim Van Dooren, KU LEUVEN, Belgium

**How the ethical stances of source and recipient affect laypeople’s evaluation of scientific claims**
Marc Stadtler, University of Münster, Germany; Lisa Scharrer, University of Münster, Germany; Rainer Bromme, University of Münster, Germany

**How does teachers’ epistemic thinking relate to their inquiry-based teaching practices?**
Tessa van Schijndel, Leiden University, Netherlands; Nadira Saab, Leiden University, Netherlands; Amanda Berry, RMIT University, Australia; Jan van Driel, The University of Melbourne, Australia

**Children’s minds at work in argumentative activity**
Josephine Convertini, University of Neuchâtel, Switzerland; Anne-Nelly Perret-Clermont, University of Neuchâtel, Switzerland; Antonio Iannaccone, Institut de Psychologie et Education, Switzerland

### SINGLE PAPER: EDUCATIONAL THEORY

**Chair**
Pirkko Siklander, University of Lapland, Finland

**The virtuous circle between educational research and educational policies**
Emilio Lastrucci, University of Basilicata, Italy

**Teachers making sense of educational change: Perezhivanie in a temporal perspective**
Antti Rajala, University of Helsinki, Finland; Kristiina Kumpulainen, University of Helsinki, Finland; Anna Mikko, University of Helsinki, Finland

**Visualisation as a method to represent perezhivanie as a unity of emotional experience-in-place**
Peter David Renshaw, The University of Queensland, Australia; Marcelo Valente Ramos, The University of Queensland, Australia

**Reading dramatically: Affect and generalization in primary school from the lenses of perezhivanie**
Alfredo Jornet Gil, University of Oslo, Norway
**Session K: 17**

**Time:** 08:30-10:00

**Location:** Main Building A - A2A

### SINGLE PAPER: LEARNING AND PROFESSIONAL DEVELOPMENT - D

**Chair**
Roger Säljö, University of Gothenburg, Sweden

**Towards Student-Centred Pedagogy: Action Research with Ethiopian Village School Teachers**
Kati Keskis-Mäenpää, University of Jyväskylä, Finland

**Five Years of a National Mentoring Program for Novice Principals: Benefits and Weaknesses**
Frauke Meyer, University of Auckland, New Zealand; Viviane M.J. Robinson, University of Auckland, New Zealand; Jacqueline Patuawa, University of Auckland, New Zealand

**Student teachers' explanatory voices on theory-practice interaction**
Siniika Kaartinen, University of Jyväskylä, Finland; Kristiina Kumpulainen, University of Helsinki, Finland

**Identity Work and Meaning-making during Organizational Storytelling**
Satu Hakanurmi, University of Turku, Finland

**Annotations:**
The presentation by Kati Keskis-Mäenpää (Towards Student-Centred Pedagogy: Action Research with Ethiopian Village School Teachers) is Cancelled.

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**Session K: 18**

**Time:** 08:30-10:00

**Location:** Main Building C - C5

### SINGLE PAPER: INQUIRY LEARNING - B

**Chair**
Simoni Symeonidou, University of Cyprus, Cyprus

**Pre-service teachers’ guidance and dialogic inquiry-based science teaching with simulations**
Antti Lehtinen, University of Jyväskylä, Finland; Jouni Viihi, University of Jyväskylä, Finland

**Middle-school students engage in pre-instruction model revision task**
Brandon Mauciar-Augustin, Rutgers University, United States; Clark Chinn, Rutgers University, United States; Veronica Caver, Rutgers University, United States; Ravit Golan Duncan, Rutgers University, United States

**Use of Teaching Strategies to Promote Dialogic Discourse in a Design-Based Science Classroom**
Dana Gnesdillow, University of Wisconsin-Madison, United States; Nafsaniath Fatema, University of Wisconsin Madison, United States; Sadhana Puntambekar, University of Wisconsin, United States

**Studying interest and learning in an out of school workshop**
K. Ann Renninger, Swarthmore College, United States; Fatema Jivanjee, Swarthmore College, United States; Ashley McQuiller, Swarthmore College, United States

**Annotations:**
This session is chaired by Antti Lehtinen, replacing Simoni Symeonidou.
The presentation by Dana Gnesdillow (Use of Teaching Strategies to Promote Dialogic Discourse in a Design-Based Science Classroom) is cancelled and replaced by Susanne Koerber (The Development of Scientific Thinking from Kindergarten to Elementary School).
### Session K: 19  
**Time:** 08:30-10:00  
**Location:** Pinni B - B4116  

**SINGLE PAPER: EDUCATIONAL ATTAINMENT AND SCHOOL EFFECTIVENESS**

**Chair**  
Marlies ter Beek, University of Groningen, Netherlands

**Individual and Organizational Predictors of Behavioral and Emotional Risk in Schools**  
Bridget Dever, Lehigh University, United States; Erin Dowdy, University of California, Santa Barbara, United States; Randy Kamphaus, University of Oregon, United States

**A Two-year Study of Textbook Effects on German Primary School Students' Mathematical Competence**  
Ann-Katrin van den Ham, Leibniz Institute for Science and Mathematics Education (IPN), Germany; Inga Niedermeyer, Leibniz Institute for Science Education (IPN), Germany; Aiso Heinze, Leibniz Institute for Science and Mathematics Education (IPN), Germany

**Promoting Quality and Equity in Education: The impact of the Dynamic Approach to School Improvement**  
Leonidas Kyrakiides, University of Cyprus, Cyprus; Panayiotis Antoniou, University of Cambridge, United Kingdom; Evi Charalambous, University of Cyprus, Cyprus; Bert (Hubertus P M) Creemers, University of Groningen / GION, Netherlands; Dymphna Devine, University College Dublin, Ireland; Dona Papastylianou, National and Kapodistrian University of Athens, Greece; Declan Fahie, University College Dublin, Ireland

**Exploring the effects of teaching factors on promoting students’ cognitive and metacognitive skills**  
Maria Anthimou, University of Cyprus, Cyprus; Leonidas Kyrakiides, University of Cyprus, Cyprus

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### Session K: 20  
**Time:** 08:30-10:00  
**Location:** Main Building A - A05  

**SINGLE PAPER: LEARNING AND TEACHING IN CULTURALLY DIVERSE SETTINGS - B**

**Chair**  
Tom Rosman, Germany

**Potential and peril of the past: A cross-national study of teaching sensitive historical issues**  
Tsafir Goldberg, University of Haifa, Israel

**Mobile Learning in elementary Science Education**  
Charles Max, University of Luxembourg, Luxembourg

**Self-reported reasons for acceptance or rejection of bilingual interaction during peer-learning**  
Martin Schastak, German Institute of International Educational Research (DIPF); IDeA-Research Center, Germany; Valentina Reitenbach, German Institute for International Educational Research, Germany; Jasmin Decristan, Goethe-University Frankfurt; IDeA-Research Center, Germany; Dominique Rauch, German Institute for International Educational Research (DIPF), Germany

**Teachers' Beliefs and Educational Practice Concerning Cultural Diversity**  
Luca Agostinetti, University of Padova, Italy; Lisa Bugno, Università degli Studi di Padova (University of Padua), Italy
# SINGLE PAPER: TEACHING AND TEACHER EDUCATION - T

**Chair**
Debra Myhill, University of Exeter, United Kingdom

**Trainee teachers’ conceptions of their own learning: does context make a difference?**
Peter Davies, University of Birmingham, United Kingdom; Rachel Lotthouse, University of Newcastle, UK, United Kingdom; Celia Greenway, University of Birmingham, United Kingdom; Dan Davies, Cardiff Metropolitan University, United Kingdom

**Vocational teachers’ perceptions in mobile-supported boundary-crossing settings**
Elisa Motta, Swiss Federal Institute for Vocational Education and Training, Switzerland; Alberto Cattaneo, Swiss Federal Institute for Vocational Eduation and Training (SFIVET), Switzerland; Raija Hamalainen, University of Jyväskylä, Finland

**Pre-service Teachers’ Perceptions of Their Strategic Learning Skills and Collaboration Dispositions**
Päivi Häkkinen, University of Jyväskylä, Finland; Anne Virtanen, University of Jyväskylä, Finland; Johanna Pöysä-Tarhonen, University of Jyväskylä, Finland; Mikko Nililo-Rämä, University of Jyväskylä, Finland; Piia Naykki, University of Oulu, Finland; Sanna Järvelä, University of Oulu, Finland

**Motivation for professional development: A subjective perspective from teachers**
Claudia Krille, Goethe-Universität Frankfurt, Germany

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# SINGLE PAPER: WRITING, LITERACY AND LANGUAGE

**Chair**
Ellen Usher, University of Kentucky, United States

**The use of generic language in pedagogical and non-pedagogical contexts in a diglossic environment**
Ursina Markwalder, ETH Zurich, Switzerland; Henrik Saalbach, University of Leipzig, Germany; Lennart Schalk, ETH Zurich - Research on Learning and Instruction, Switzerland

**How assessors differ in the aspects they look at when comparing texts**
Marije Lesterhuis, University of Antwerp, Belgium; Sven De Maeyer, University of Antwerp, Belgium; Vincent Donche, University of Antwerp, Belgium

**To plan or not to plan: The effects of planning on the process and product of writing**
Teresa Limpo, University of Porto, Portugal; Rui Alexandre Alves, University of Porto, Portugal

**Modelling the effectiveness of peer review comments**
Djuddah Leijen, University of Tartu, Estonia
### SINGLE PAPER: ARGUMENTATION, DIALOGUE AND REASONING - B

<table>
<thead>
<tr>
<th>Chair</th>
<th>Analysing student argumentation in lower secondary mathematics and science</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pamela Paek, United States</td>
<td>Jenna Hiltunen, University of Jyväskylä, Finland; Kaisa Jokiranta, University of Jyväskylä, Finland; Jouni Viiri, University of Jyväskylä, Finland; Markus Hähköniemi, University of Jyväskylä, Finland; Pasi Nieminen, University of Jyväskylä, Finland; Sami Lehervuori, University of Jyväskylä, Finland</td>
</tr>
</tbody>
</table>

**Upper secondary school students’ abilities to question the credibility of Internet sources**

Miika Marttunen, University of Jyväskylä, Finland; Timo Salminen, University of Jyväskylä, Finland; Carita Kiili, University of Oslo, Norway

**Sequencing and fading worked examples and collaboration scripts to foster mathematical argumentation**

Freydis Vogel, Technical University of Munich (TUM), Germany; Matthias Schwaighofer, Ludwig-Maximilians-Universität (LMU), Germany; Ingo Koliar, University of Augsburg, Germany; Anselm Strohmaier, Technische Universität München (TUM), Germany; Sarah Ottinger, Ludwig-Maximilians-Universität (LMU), Germany; Ilka Terwedow, Ludwig-Maximilians-Universität (LMU), Germany; Kristina Reiss, Technische Universität München (TUM), Germany; Frank Fischer, Ludwig-Maximilians-Universität (LMU), Germany

**argumentApp: The use of a tablet-supported software to promote and sustain classroom argumentation.**

Antonia Larrain, Universidad Alberto Hurtado, Chile; Patricia Lopez, Universidad Alberto Hurtado, Chile; Jorge Pincolet, Universidad Alberto Hurtado, Chile; Katherine Strasser, Pontificia Universidad Catolica de Chile, Chile; Christine Howe, University of Cambridge, United Kingdom; Selma Leitao, Universidade Federal de Pernambuco, Brazil; Elizabeth Plé, Université de Reims Champagne-Ardenne, France
Session K: 24  Time: 08:30-10:00  Location: Main Building A - A4

SYMPOSIUM: THE INTERSECTION BETWEEN DEPTH AND THE REGULATION OF STRATEGY USE

Chair
Luke K. Fryer, The University of Hong Kong, Hong Kong

Organisers
Daniel Dinsmore, University of North Florida, United States; Luke K. Fryer, The University of Hong Kong, Hong Kong

Discussant
Patricia A. Alexander, University of Maryland, United States

The Relations between Strategic and Metacognitive Processing During Science Simulations
Daniel Dinsmore, University of North Florida, United States; Brian Zoellner, University of North Florida, United States

Triangulating online and offline measures to explore students’ processing strategies
Leen Catrysse, University of Antwerp, Belgium; David Gijsels, University of Antwerp, Belgium; Vincent Donche, University of Antwerp, Belgium; Marije Leatherhuis, University of Antwerp, Belgium

Monitoring and Depth of Strategy Use in Computer-Based Learning Environments for Science and History
Nikki Lobczowski, University of North Carolina at Chapel Hill, United States; Jeff Greene, University of North Carolina, United States; Victor Deekens, University of North Carolina at Chapel Hill, United States

Bridging cross-cultural perspectives on how students study and learn university course materials
Jan Vermunt, University of Cambridge, United Kingdom; Vincent Donche, Universiteit Antwerpen, Belgium; Yu Ji, Cambridge University, United Kingdom; Jose Reinaldo Martinez-Fernandez, Autonomous University of Barcelona, Spain; Clara Ajsiukmo, Atma Jaya Catholic University of Indonesia, Indonesia; Daniel Law Chung S Law Chung Sea, Council on Law in Higher Education, Hong Kong; Luke Fryer, The University of Hong Kong, Hong Kong

Session K: 25  Time: 08:30-10:00  Location: Pinni B - B1100

SYMPOSIUM: HOW TO OPTIMIZE EXAMPLE-BASED LEARNING?

Chair
Julian Roelle, Bielefeld University, Germany

Discussant
Katharina Scheiter, Leibniz-Institut für Wissensmedien, Germany

Fostering Learning From Examples by Prompting Organization Processes
Sara Hiller, Bielefeld University, Germany; Julian Roelle, Bielefeld University, Germany; Kirsten Berthold, University of Bielefeld, Germany; Stefan Rumann, University of Duisburg-Essen, Germany

Sequencing Worked Examples: Effects of Blocking, Interleaving, Comparison, and Contrast
Lennart Schalk, ETH Zurich, Switzerland; Julian Roelle, Bielefeld University, Germany; Henrik Saalbach, University of Leipzig, Germany; Kirsten Berthold, University of Bielefeld, Germany; Elisabeth Stern, ETH Zurich, Switzerland; Alexander Renkl, University of Freiburg, Germany

Learning From and By Example
Vincent Hoogerheide, Utrecht University, Netherlands; Tamara Van Gog, Utrecht University, Netherlands; Alexander Renkl, University of Freiburg, Germany; Logan Fiorella, University of Georgia, United States; Fred Paas, Erasmus University Rotterdam/University of Wollongong, Netherlands

Productive or Vicarious Failure: Do Students Need to Make Every Mistake by Themselves?
Christian Hartmann, Ruhr University Bochum, Germany; Nikol Rummel, Ruhr University Bochum, Institute of Educational Research, Germany; Tamara Van Gog, Utrecht University, Netherlands
### INVITED SYMPOSIUM: LEARNING WITH DYNAMIC MEDIA IN FORMAL AND INFORMAL CONTEXTS

**Chair**
Mireille Betancourt, University of Geneva, Switzerland

**Organisers**
Mireille Betancourt, University of Geneva, Switzerland; Juliette Désiron, University of Geneva, Switzerland

**Discussant**
Hub Tabbers, Erasmus University Rotterdam, Netherlands

<table>
<thead>
<tr>
<th>Title</th>
<th>Speaker/Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investigating the effectiveness of Demonstration-Based Training (DBT) videos for Chinese students</td>
<td>Hans van der Meij, University of Twente, Netherlands</td>
</tr>
<tr>
<td>Does the frequency of pauses in videos affect learning?</td>
<td>Martin Merkt, Leibniz-Institut für Wissensmedien, Germany; Stephan Schwan, Leibniz - Institut für Wissensmedien, Germany</td>
</tr>
<tr>
<td>Demonstration as an aid to learning from animation</td>
<td>Richard Lowe, Curtin University, Australia; Jean-Michel Boucheix, University of Dijon, LEAD-CNRS, France</td>
</tr>
<tr>
<td>Complementing theoretical frames for understanding global how-to-video-sharing</td>
<td>Erica de Vries, Université Grenoble Alpes, France</td>
</tr>
</tbody>
</table>

### INVITED SYMPOSIUM: PRACTICE-BASED PRACTITIONER RESEARCH IN EDUCATION

**Chair**
Sirpa Laitinen-Väännänen, JAMK University of Applied Sciences, Finland

**Organiser**
Sirpa Laitinen-Väännänen, JAMK University of Applied Sciences, Finland

**Discussant**
Filip Dochy, KU Leuven, Belgium

<table>
<thead>
<tr>
<th>Title</th>
<th>Speaker/Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>The role of research in teacher education</td>
<td>Kari Smith, Norwegian University of Science and Technology, Norway</td>
</tr>
<tr>
<td>Educators’ professional development in Flanders: Practitioner research, a promising strategy</td>
<td>Ruben Vanderlinde, Ghent University, Belgium; Hanne Tack, Ghent University, Belgium</td>
</tr>
<tr>
<td>Practice-based and practitioner research in social science e.g. education is of a different nature</td>
<td>Frank De Jong, Aeres University of Applied Sciences, Netherlands</td>
</tr>
<tr>
<td>Interaction as the locus (for the observation) of practice - an example</td>
<td>Gudrun Ziegler, multi-LEARN Institute, Luxembourg</td>
</tr>
</tbody>
</table>
### SYMPOSIUM: LEARNING TO READ ACROSS LANGUAGES AND WRITING SYSTEMS:
**IMPLICATIONS FOR EDUCATION**

<table>
<thead>
<tr>
<th>Chair</th>
<th>Learning to read Dutch as a transparent orthography</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ludo Verhoeven, Radboud University Nijmegen, Netherlands</td>
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<table>
<thead>
<tr>
<th>Discussant</th>
<th>Learning to read and spell Finnish as a symmetrically transparent orthography</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charles Perfetti, University of Pittsburgh, United States</td>
<td></td>
</tr>
</tbody>
</table>

| | The Impact of Diglossia on Voweled and Unvoweled Word Reading in Arabic |
| | Elinor Saiegh-Haddad, Bar-Ilan University, Israel |

| | Learning to read Chinese as a logographic orthography |
| | Xi Chen, OISE/University of Toronto, Canada |

### SYMPOSIUM: MATHEMATICAL FLEXIBILITY IN THREE COUNTRIES: COMPARATIVE RESULTS

<table>
<thead>
<tr>
<th>Chair</th>
<th>Potential Flexibility and Practical Flexibility in Equation Solving</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jon Star, Harvard University, United States; Le Xu, Beijing Normal University, China; Ru-De Liu, Beijing Normal University, China; Jia Wang, Beijing Normal University, China; Ying Liu, Beijing Normal University, China; Rui Zhen, Beijing Normal University, China</td>
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</tbody>
</table>

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<thead>
<tr>
<th>Discussant</th>
<th>Flexibility in linear equation solving by Spanish secondary students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mike Altieri, Ruhr West University of Applied Sciences, Germany</td>
<td></td>
</tr>
</tbody>
</table>

| | Flexibility among Finnish students |
| | Rikka Paikki, University of Oulu, Finland; Dmitri Tuomela, University of Oulu, Finland; Anna-Helena Hietamäki, University of Oulu, Finland; Peter Hästö, University of Oulu, Finland |

| | Turning Potential Flexibility Into Flexible Performance |
| | Jon Star, Harvard University, United States; Jia Wang, Beijing Normal University, China; Ru-De Liu, Beijing Normal University, China; Le Xu, Beijing Normal University, China; Rui Zhen, Beijing Normal University, China |
### Session L: 3
**Time:** 10:15-11:45  
**Location:** Main Building E - E301

**SYMPOSIUM: TEACHER GAZE AND TEACHER-STUDENT INTERACTIONS IN DIFFERENT CULTURAL CONTEXTS**

**Chair**  
Irene Skuballa, New York University Abu Dhabi, United Arab Emirates

**Organiser**  
Irene Skuballa, New York University Abu Dhabi, United Arab Emirates

**Discussant**  
Matthias Nückles, University of Freiburg, Germany

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors and Affiliations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Through Teachers’ Lenses: Gaze Behavior in United Arab Emirates Classrooms</td>
<td>Irene Skuballa, New York University Abu Dhabi, United Arab Emirates; Antje von Suchodoletz, New York University Abu Dhabi, United Arab Emirates</td>
</tr>
<tr>
<td>Teacher Gaze in Relation to Teacher-Child Interactions and Efficacy Beliefs in Finnish Kindergarten</td>
<td>Maria-Kristiina Lerkanen, University of Jyväskylä, Finland; Eija Pakarinen, University of Jyväskylä, Finland; Heli Muonen, University of Jyväskylä, Finland</td>
</tr>
<tr>
<td>Expert Teacher Interpersonal Gaze in Chinese Classroom Settings</td>
<td>Nora McIntyre, University of Sheffield, United Kingdom; Robert Klassen, University of York, United Kingdom</td>
</tr>
<tr>
<td>The Relations Between Teacher’s Vision and Children’s Cognitive, Social and Academic Performance</td>
<td>Fitim Uka, University of Freiburg, Germany; Antje von Suchodoletz, New York University Abu Dhabi, United Arab Emirates</td>
</tr>
</tbody>
</table>

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### Session L: 4
**Time:** 10:15-11:45  
**Location:** Pinni B - B3116

**SYMPOSIUM: WHY IS IT SO HARD? TEACHERS’ GROWTH IN SCAFFOLDING COLLABORATIVE DIALOGUE**

**Chair**  
Sherice Clarke, United States

**Discussant**  
Ian A.G. Wilkinson, The Ohio State University, United States

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors and Affiliations</th>
</tr>
</thead>
<tbody>
<tr>
<td>A mixed methods review: Teacher training and teachers’ impact on collaborative learning</td>
<td>Anouschka van Leeuwen, Utrecht University, Netherlands; Jeroen Janssen, Utrecht University, Netherlands</td>
</tr>
<tr>
<td>Teachers’ Transition from Recitation to Collaborative Reasoning</td>
<td>Jingjing Sun, University of Montana, United States; Hong Li, Beijing Normal University, China; Jie Zhang, University of Houston, United States; Julia Jackson, University of Montana, United States</td>
</tr>
<tr>
<td>Towards the Development of Students’ Capacity for Mathematical Discussion</td>
<td>Hee-jeong Kim, Hongik University, Korea, Republic of</td>
</tr>
<tr>
<td>The Process of Change: Professional Growth in Dialogic Teaching in High School Science</td>
<td>Sherice Clarke, University of California, San Diego, United States; Lauren B. Resnick, University of Pittsburgh, United States</td>
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</table>

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<table>
<thead>
<tr>
<th>Session L: 5</th>
<th>Time: 10:15-11:45</th>
<th>Location: Linna - K108</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SYMPOSIUM: TOOLS FOR EXAMINING INDIVIDUAL DIFFERENCES IN LEARNING: LATENT VARIABLE MIXTURE MODELS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Chair</strong></td>
<td>Marian Hickendorf, Leiden University, Netherlands</td>
<td></td>
</tr>
<tr>
<td><strong>Organiser</strong></td>
<td>Marian Hickendorf, Leiden University, Netherlands</td>
<td></td>
</tr>
<tr>
<td><strong>Discussant</strong></td>
<td>Jake McMullen, University of Turku, Finland</td>
<td></td>
</tr>
</tbody>
</table>

**Conceptual Change in Higher Education Learning: A Latent Transition Analysis**  
Maja Fläig, University of Trier, Germany; Bianca Simonsmeier, University of Trier, Germany; Anne-Kathrin Mayer, ZPID - Leibniz Institute for Psychology Information, Germany; Tom Rosman, Leibniz Institute for Psychology Information, Germany; Michael Schneider, University of Trier, Germany

**Using Latent Transition Analysis to Identify Patterns of Change in Math Strategies**  
Kelly Trezise, The University of Melbourne, Australia; Robert Reeve, University of Melbourne, United Kingdom

**Learning to Solve Analogies: The Paths Children Take**  
Marian Hickendorf, Leiden University, Netherlands; Claire Stevenson, University of Amsterdam, Netherlands

**Prematurely and full term born children’s early mathematical skill profiles**  
Minna M Hannula-Sormunen, University of Turku, Finland; Eero Laakkonen, University of Turku, Finland; Petrina Munck, University of Turku, Finland; Noona Kiuru, University of Jyväskylä, Finland; Pipary Pipary Study Group, University of Turku, Finland

<table>
<thead>
<tr>
<th>Session L: 6</th>
<th>Time: 10:15-11:45</th>
<th>Location: Main Building A - A32</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SYMPOSIUM: MEASURING SELF-REGULATED LEARNING: THEORETICAL CONSIDERATIONS AND PRACTICAL APPLICATIONS</strong></td>
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<td></td>
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<tr>
<td><strong>Chair</strong></td>
<td>Philip Winne, Simon Fraser University, Canada</td>
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<tr>
<td><strong>Discussant</strong></td>
<td>Inge Molenaar, Radboud University Nijmegen, Netherlands</td>
<td></td>
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</tbody>
</table>

**Measuring self-regulated learning in higher education: A comparison of different methods**  
Sanne Rovers, Maastricht University, Netherlands; Geraldine Clarebout, Maastricht University, Netherlands; Hans Savelberg, Maastricht University, Netherlands; Jeroen Van Merrienboer, Maastricht University, Netherlands

**Gathering and Analyzing Trace Data to Measure Cognition and Motivation in Self-Regulated Learning**  
Philip Winne, Simon Fraser University, Canada

**Learners’ Characteristics and Self-regulatory Behaviour in Blended Learning Environments**  
Stijn Van Laer, KU Leuven, Belgium; Jan Elen, KU Leuven - University of Leuven, Belgium

**Sequence Mining to Measure SRL and Scientific Reasoning in a Game-Based Learning Environment**  
Michelle Taub, North Carolina State University, United States; Roger Azevedo, North Carolina State University, United States; Amanda Bradbury, North Carolina State University, United States; Garrett Millar, North Carolina State University, United States; Megan Price, North Carolina State University, United States; Nicholas Mudrick, North Carolina State University, United States
### Session L: 7
**Time:** 10:15-11:45  
**Location:** Pinni B - B3107

#### SYMPOSIUM: HISTORY IN THE MAKING. INTERACTIONS BETWEEN HISTORICAL COMPETENCIES AND WRITING PERFORMANCES

<table>
<thead>
<tr>
<th>Chair</th>
<th>Epistemic beliefs and historical thinking competency as pre-requisites for historical writing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jannet van Drie, University of Amsterdam, Netherlands</td>
<td>Monika Waldis, University of Applied Sciences Northwestern Switzerland, Switzerland; Martin Nitsche, University of Applied Sciences of North-Western Switzerland, Switzerland</td>
</tr>
<tr>
<td>Discussant</td>
<td>The impact of different authentic instructional material on students’</td>
</tr>
<tr>
<td>Susan Goldman, University of Illinois at Chicago, United States</td>
<td>Nicola Brauch, University of Bochum, Germany; Marcel Mierwald, Ruhr University Bochum, Germany; Thomas Lehmann, University of Bremen, Germany</td>
</tr>
<tr>
<td></td>
<td>Domain-specific writing instruction in history: effects on products and processes</td>
</tr>
<tr>
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<td>Jannet van Drie, University of Amsterdam, Netherlands; Daphne van Weijen, University of Amsterdam, Netherlands</td>
</tr>
<tr>
<td></td>
<td>Causal (re-)writing in history; working on (too) many levels?</td>
</tr>
<tr>
<td></td>
<td>Gerhard Stoeel, RICDE / University of Amsterdam, Netherlands; Jannet van Drie, University of Amsterdam, Netherlands; Carla Van Boxtel, University of Amsterdam, Netherlands</td>
</tr>
</tbody>
</table>

### Session L: 8
**Time:** 10:15-11:45  
**Location:** Pinni B - B4116

#### SYMPOSIUM: EYE TRACKING AS A METHOD IN LEARNING AND TESTING WITH DIFFERENT REPRESENTATIONS

<table>
<thead>
<tr>
<th>Chair</th>
<th>The value of multilevel and gaze-likelihood analyses in eye-tracking studies: A multimedia example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Juliane Richter, Leibniz-Institut für Wissensmedien, Germany</td>
<td>Marit Annalena Lindner, Leibniz Institute for Science and Mathematics Education (IPN), Germany; Alexander Eitel, University of Freiburg, Germany; Benjamin Strobel, IPN Leibniz-Institut für die Pädagogik der Naturwissenschaften und Mathematik, Germany; Olaf Koeller, Leibniz Institute for Science and Mathematics Education, Germany</td>
</tr>
<tr>
<td>Discussant</td>
<td>Attention distribution when solving mathematic-textual tasks. An eye tracking experimental study</td>
</tr>
<tr>
<td>Andreas Gegenfurtner, Technische Hochschule Deggendorf, Germany</td>
<td>Krzysztof Krejtz, University of Social Sciences and Humanities, Poland; Andrew T. Duchowski, Clemson University, United States; Marcin Karpiński, Education Research Institute, Poland; Małgorzata Zambrowska, Education Research Institute, Poland; Cezary Biele, National Information Processing Institute, Poland; Agata Kopacz, National Information Processing Institute, Poland; Izabela Krejtz, SWPS University of Social Sciences and Humanities, Poland</td>
</tr>
<tr>
<td></td>
<td>The effectiveness of compositional animation design: Evidence from eye tracking</td>
</tr>
<tr>
<td></td>
<td>Jean-Michel Boucheix, University of Dijon, LEAD-CNRS, France; Richard Lowe, Curtin University, Australia</td>
</tr>
<tr>
<td></td>
<td>Expertise reversal of the signaling effect: Evidence from eye tracking</td>
</tr>
<tr>
<td></td>
<td>Juliane Richter, Leibniz-Institut für Wissensmedien, Germany; Katharina Scheiter, Leibniz-Institut für Wissensmedien, Germany</td>
</tr>
</tbody>
</table>
### SYMPOSIUM: FOCUSING (ON) TEACHER ATTENTION AND LEARNING

**Chair**  
Hilary Hollingsworth, Australian Council for Educational Research, Australia

**Discussant**  
Valeska Grau, Pontificia Universidad Católica de Chile, Chile

<table>
<thead>
<tr>
<th>Learning from Lessons: Studying the structure and construction of teacher knowledge</th>
</tr>
</thead>
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<td>Doug Clarke, Australian Catholic University, Australia; Man Ching Esther Chan, The University of Melbourne, Australia; David Clarke, The University of Melbourne, Australia; Anne Roche, Australian Catholic University, Australia</td>
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<tr>
<th>Using head-mounted video to investigate the attentional focus of primary mathematics teachers</th>
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<td>Carmel Mesiti, University of Melbourne, Australia; Dan Jazby, The University of Melbourne, Australia; David Clarke, The University of Melbourne, Australia</td>
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<tr>
<th>Focusing teacher attention through the framing of salience: The structured stimulation of reflection</th>
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<td>Hilary Hollingsworth, Australian Council for Educational Research, Australia</td>
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<tr>
<th>Focusing Teacher Attention and Learning through Culturally Embedded Lesson Study in the Philippines</th>
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<tr>
<td>David Clarke, The University of Melbourne, Australia; Marlon Ebaeguin, University of the Philippines Diliman, Philippines</td>
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**ANNOTATIONS:**  
THIS SESSION IS MOVED TO SESSION B:28 TO ROOM MAIN BUILDING A - A32.

### SYMPOSIUM: FRONTIERS IN UNDERSTANDING THE SOCIAL NATURE OF LEARNING

**Chair**  
Josephine Moate, University of Jyväskylä, Finland

**Discussant**  
Roger Säljö, University of Gothenburg, Sweden

<table>
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<tr>
<th>Entangled Modes of Social Interaction in Student Collaborative Problem Solving in Mathematics</th>
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<td>Man Ching Esther Chan, The University of Melbourne, Australia; David Clarke, The University of Melbourne, Australia</td>
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<tr>
<th>What kinds of teacher-learner interactions promote learning and cognitive development?</th>
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<tr>
<td>Neil Mercer, University of Cambridge, United Kingdom</td>
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<th>Investigating the development of pedagogical understanding in response to cultural diversity</th>
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<td>Josephine Moate, University of Jyväskylä, Finland</td>
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<tr>
<th>A person perspective in interest research: tracing multiple interests in multiple contexts over time</th>
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<tr>
<td>Sanne Akkerman, Leiden University, Netherlands; Arthur Bakker, Utrecht University, Netherlands</td>
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</table>
### SYMPOSIUM: HOMEWORK: PARENTAL ASSISTANCE AND CHILDREN’S ACADEMIC OUTCOMES

**Chair**  
Riikka Hirvonen, University of Jyväskylä, Finland

**Discussant**  
Hilde Van Keer, Ghent University, Belgium

**Parental involvement in children’s homework in Greece and Finland**  
Anne-Elina Salo, University of Turku, Finland; Elefteria Gonida, Aristotle University of Thessaloniki, Greece; Marja Vauras, University of Turku, Finland; Ioulia Ntousi Ntousi, Aristotelian University of Thessaloniki, Greece

**Parental homework assistance and children’s motivational behavior**  
Riikka Hirvonen, University of Jyväskylä, Finland; Jaana Viljaranta, University of Eastern Finland, Finland; Gintautas Silinas, University of Jyväskylä, Finland; Eija Pakarinen, University of Jyväskylä, Finland; Marja-Kristiina Lerkkanen, University of Jyväskylä, Finland; Anna-Maija Polikkeus, University of Jyväskylä, Finland; Jari-Erik Nurmi, University of Jyväskylä, Finland

**Perceived parental involvement in homework and children’s math performance and motivation**  
Anna-Lisa Jõgi, Tallinn University, Estonia; Eve Kikas, Tallinn University, Estonia; Gintautas Silinas, University of Jyväskylä, Finland

**The need to distinguish between the quantity and quality of parental homework involvement**  
Hanna Dumont, German Institute for International Educational Research (DIPF), Germany; Sandra Moroni, University of Bern, Switzerland

### SYMPOSIUM: SCIENTIFIC REASONING: DOMAIN-SPECIFIC OR DOMAIN GENERAL?

**Chair**  
Frank Fischer, Ludwig-Maximilians-Universität (LMU), Germany

**Discussant**  
Manfred Prenzel, Technical University of Munich (TUM), Germany

**What is the Value of General Knowledge of Scientific Reasoning?**  
Clark Chinn, Rutgers University, United States; Ravit Golan Ducan, GSE-Rutgers University, United States

**Scientific Reasoning and Argumentation as Cross-Domain Competence**  
Frank Fischer, Ludwig-Maximilians-Universität (LMU), Germany; Andreas Hetmanek, Technical University of Munich, Germany; Katharina Engelmann, Technical University of Munich (TUM), Germany; Ansgar Opitz, Ludwig-Maximilians-Universität (LMU), Germany

**Scientific Reasoning: A product not a process?**  
Jonathan Osborne, Stanford University, United States

**Primary domain-general v. secondary domain-specific knowledge: Is there a link between the two?**  
André Tricot, University of Toulouse, France; Florence Lespiau, University of Toulouse, France; Jean-François Bonnefon, Toulouse School of Economics, University of Toulouse, Finland
### SYMPOSIUM: PHYSICAL FITNESS, MOTOR SKILLS AND ACADEMIC PERFORMANCE IN EARLY AND MIDDLE CHILDHOOD

**Chair**
Claudia Roebers, University of Bern, Switzerland

**Discussant**
Esther Hartman, University Medical Center Groningen / University of Groningen, Netherlands

**Motor and Cognitive Skills: Structure and Early Links in Young Mexican Children**
Fabiola Figueroa Esquivel, University of Groningen, Netherlands; Mayra Mascareño, University of Groningen, Netherlands; Esther Hartman, Center for Human Movement Sciences, University Medical Center Groningen/University of Groningen, Netherlands; Jan-Willem Strijbos, University of Groningen, Netherlands; Roel J. Bosker, Rijksuniversiteit Groningen, Dept of Education and GION, Netherlands

**Motor Skills, Executive Functions, and Basic Numerical Skills predict later mathematics achievement**
Venera Gashaj, University of Bern, Switzerland; Fred Mast, University of Bern, Switzerland

**Motor coordination and executive functions: Relative contributions to early academic achievement**
Claudia Roebers, University of Bern, Switzerland; Nicole Oberer, University of Bern, Switzerland

**Sedentary time and academic achievement in schoolchildren**
Luis Lopes, University of Porto, Portugal

### SYMPOSIUM: SCIENTIFIC REASONING FROM CHILDHOOD TO UNIVERSITY: NEW ASSESSMENT APPROACHES FOR NEW INSIGHTS

**Chair**
Peter Edelsbrunner, ETH Zurich, Switzerland

**Discussant**
James Pellegrino, University of Illinois at Chicago, United States

**Assessment of misconceptions about experimentation in primary school children**
Sonja Peteranderl, ETH Zurich, Switzerland; Anne Deiglmayr, ETH Zurich, Switzerland; Ralph Schumacher, ETH Zurich, Switzerland; Peter Edelsbrunner, ETH Zurich, Switzerland; Elisabeth Stern, ETH Zurich, Switzerland

**The development of domain-general reasoning skills and their dependency on domain-specific knowledge**
Martin Schwichow, University of Education Freiburg, Germany

**Argumentation about the Control of Variables-Strategy: A large-scale Study in Primary School**
Peter Edelsbrunner, ETH Zurich, Switzerland; Anne Deiglmayr, ETH Zurich, Switzerland

**How to know whether two variables are related? Modeling reasoners’ strategies in data interpretation**
Christopher Osterhaus, University of Munich, Germany; Jackie Magee, University of Wisconsin-Madison, United States; Andrea Saffran, LMU Munich, Germany; Beate Sodian, Ludwig-Maximilians-Universität (LMU), Germany; Martha Albal, University of Wisconsin-Madison, United States
### Session L: 15
**Time:** 10:15-11:45  
**Location:** Pinni B - B1096

**SYMPOSIUM: CRITICAL THINKING IN HIGHER EDUCATION: A CLOSER LOOK AT TEACHERS AND STUDENTS**

**Chair**  
Anita Heijtjes, Avans university of applied sciences, Netherlands

**Organisers**  
Lara van Peppen, Erasmus University Rotterdam, Netherlands; Eva Janssen, Utrecht University, Netherlands

**Discussant**  
Jan Elen, KU Leuven, Belgium

**Effects of Self-explaining on Learning and Transfer of Critical Thinking Skills**  
Lara van Peppen, Erasmus University Rotterdam, Netherlands; Peter Verkoeijen, Erasmus University Rotterdam, Netherlands; Anita Heijtjes, Avans University of Applied Sciences, Netherlands; Eva Janssen, Utrecht University, Netherlands; Denise Koopmans, Utrecht University, Netherlands; Tamara Van Gog, Utrecht University, Netherlands

**Personal or Social Responsibility? Challenging Social Ideas as a Component of Critical Thinking**  
Maria Pilar Jimenez-Aleixandre, University of Santiago de Compostela, Spain; Blanca Puig, University of Santiago de Compostela, Spain; Pablo Brocos, University of Santiago de Compostela, Spain

**Critical Thinking in Medical Diagnosis: Structured Reflection Remedies Error and Fosters Learning**  
Tamara Van Gog, Utrecht University, Netherlands; Josepha Kuhn, Erasmus MC, Netherlands; Sylvia Mamede, Erasmus MC, Netherlands; Pieter van der Berg, Erasmus MC, Netherlands

**Teachers’ Critical Thinking Skills, Dispositions, and Attitudes towards Teaching in Higher Education**  
Eva Janssen, Utrecht University, Netherlands; Wietse Meulendijks, Utrecht University, Netherlands; Tim Mainhard, Utrecht University, Netherlands; Anita Heijtjes, Avans University of Applied Sciences, Netherlands; Lara van Peppen, Erasmus University Rotterdam, Netherlands; Tamara Van Gog, Utrecht University, Netherlands

### Session L: 16
**Time:** 10:15-11:45  
**Location:** Linna - Väinö Linna (K104)

**SYMPOSIUM: EFFECTS OF EXPLICIT AND IMPLICIT GUIDANCE ON EXTERNAL AND SELF-REGULATION THROUGH CONFLICT AWARENESS**

**Chair**  
Daniel Bodemer, University of Duisburg-Essen, Germany

**Organisers**  
Dimitra Tsouvaltzis, Saarland University, Germany; Daniel Bodemer, University of Duisburg-Essen, Germany; Melanie Erkens, University of Duisburg-Essen, Germany; Sven Heimbuch, University of Duisburg-Essen, Germany; Thomas Puhl, Saarland University, Germany; Lenka Schnaubert, University of Duisburg-Essen, Germany; Armin Weinberger, Saarland University, Germany

**Discussant**  
Christa Asterhan, Hebrew University of Jerusalem, Israel

**Implicit guidance by fostering conflict awareness in collaborative learning scenarios**  
Lenka Schnaubert, University of Duisburg-Essen, Germany; Melanie Erkens, University of Duisburg-Essen, Germany; Sven Heimbuch, University of Duisburg-Essen, Germany; Daniel Bodemer, University of Duisburg-Essen, Germany

**Promoting Socially Shared Regulation in collaboration: Implicit guidance of strategic planning**  
Rebecca Edwards, University of Victoria, Canada; Allyson Hadwin, University of Victoria, Canada; Mariel Miller, University of Victoria, Canada; Shayla Starcheski, University of Victoria, Canada

**Applying a macro-script to enhance teacher education students’ collaborative knowledge construction**  
Essi Vuopala, University of Oulu, Finland; Pia Naykki, University of Oulu, Finland; Jaana Isolahall, University of Oulu, Finland; Sanna Järvelä, University of Oulu, Finland

**Effects of Fading Out Collaboration Scripts on Argumentation and Learning Outcomes in Facebook**  
Thomas Puhl, Saarland University, Germany; Essi Vuopala, University of Oulu, Finland; Tarja-Riitta Hurme, University of Turku, Finland; Armin Weinberger, Saarland University, Germany
SYMPOSIUM: ANALYSING PRODUCTIVE CLASSROOM AND PROFESSIONAL DIALOGUES ACROSS CONTEXTS USING DIFFERENT TOOLS

**Chair**
Sara Hennessy, University of Cambridge, United Kingdom

**Discussant**
Alina Reznitskaya, Montclair State University, United States

The development of a coding scheme to analyse collaborative group argumentation
Antonia Larrain, Universidad Alberto Hurtado, Chile; Paulina Freire, Universidad Alberto Hurtado, Chile; Patricia López, Universidad Alberto Hurtado, Chile; Valeska Grau, Pontificia Universidad Católica de Chile, Chile

Coding productive dialogue in whole-class primary school settings in the UK
Maria Vikki, University of Cambridge, United Kingdom; Christine Howe, University of Cambridge, United Kingdom; Sara Hennessy, University of Cambridge, United Kingdom; Neil Mercer, University of Cambridge, United Kingdom; Lisa Wheatley, University of Cambridge, United Kingdom

Productive teacher discourse in school-based team meetings: toward a systematic coding system
Miriam Babichenko, Hebrew University of Jerusalem, Israel; Christa Asterhan, Hebrew University of Jerusalem, Israel; Miri Israeli, Ben-Gurion University of the Negev, Israel; Adam Lefstein, Ben-Gurion University of the Negev, Israel

Coding feedback in an online- and video- based learning environment during a field experience
Susi Klaß, Friedrich Schiller University Jena, Germany; Marc Kleinknecht, Leuphana University of Lüneburg, Germany; Alexander Groeschner, Friedrich Schiller University Jena, Germany

ANNOTATIONS:
THIS SYMPOSIUM IS MOVED TO SESSION D: 31 IN ROOM: MAIN BUILDING C - C8.

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SYMPOSIUM: THE ROLE OF EXECUTIVE FUNCTIONS IN ACADEMIC LEARNING

**Chair**
Grégoire Borst, University Paris Descartes, France

**Organiser**
Grégoire Borst, University Paris Descartes, France

**Discussant**
Patrice Potvin, Université du Québec à Montréal, Canada

Executive function in conceptual change involved in the learning of science and mathematics concepts
Stella Vosniadou, National and Kapodistrian University of Athens / Flinders University of Australia, Greece; Dimitris Pnevmatikos, University of Western Macedonia, Greece; Nikos Makris, Democritus University of Thrace, Greece

Direct and indirect influences of executive functions on mathematics achievement
Camilla Gilmore, Loughborough University, United Kingdom; Lucy Cragg, University of Nottingham, United Kingdom

Is Inhibition Involved in Conceptual Change Learning from Refutation Text?
Sonia Zaccoletti, University of Padova, Italy; Lucia Mason, University of Padova, Italy; Irene-Anna Diakidoy, University of Cyprus, Cyprus; Barbara Carretti, University of Padova, Italy; Sara Scrimin, University of Padova, Italy

Interventions based on different aspects of executive functions improve problem solving performance
Reuven Babai, Tel Aviv University, Israel; Enav Shalev, Tel Aviv University, Israel; Ruth Stavy, Tel Aviv University, Israel
### SYMPOSIUM: TEACHERS’ REFLECTION AS A COLLABORATIVE PROCESS

| Chair | Reflection as primarily social: A Vygotskian perspective  
Alfredo Jornet Gil, University of Oslo, Norway |
| --- | --- |
| Discussant | Supporting a dyadic process of reflection on literacy experiences: A framework for teacher educators  
Andrea Gelfuso, University of Central Florida, United States |
|  | How collaboration improves preservice teachers’ reflection: A case study  
Teresa Maun, University of Barcelona, Spain; Marc Clàrè, University of Barcelona, Spain; Rosa Colomina, Universitat de Barcelona, Spain; Javier Omrubia, Faculty of Psychology, Spain; Agurtzane Martínez, University of Mondragón, Spain; Rosario Cubero, University of Sevilla, Spain |
|  | Design principles that support collaborative reflection in online groups of teachers  
Nick Kelly, Queensland University of Technology, Australia |

### SYMPOSIUM: KNOWLEDGE ACQUISITION IN MULTILINGUAL SETTINGS: CLOSE LOOK ON CONTENT & LANGUAGE INTEGRATED LEARNING

| Chair | Solving arithmetic problems in first and second language  
Amandine Van Rinsveld, University of Luxembourg, FLHASE, Luxembourg; Christine Schlitz, Université du Luxembourg, Luxembourg; Martin Brunner, Freie Universität Berlin, Germany; Karin Landerl, University of Graz, Austria; Sonja Ugen, University of Luxembourg, Austria |
| --- | --- |
| Discussant | Language-dependent knowledge acquisition: Mechanisms underlying language-switching costs  
Christian Hahn, University of Leipzig, Germany; Henrik Saalbach, University of Leipzig, Germany; Clemens Brunner, University of Graz, Austria; Lennart Schalk, ETH Zurich - Research on Learning and Instruction, Switzerland; Roland H. Grabner, University of Graz, Austria |
|  | Does Language Background Matter? Majority- and Minority-language Skills in Dual Immersion  
Johanna Fleckenstein, Leibniz Institute for Science and Mathematics Education / University of Kiel, Germany; Jens Möller, University of Kiel, Germany; Jürgen Baumert, Max Planck Institute for Human Development, Germany |
|  | Effects of dual immersion: Reading comprehension and Math  
Jens Möller, University of Kiel, Germany; Johanna Fleckenstein, Leibniz Institute for Science and Mathematics Education / University of Kiel, Germany; Sandra Preusler, Christian-Albrechts-Universität zu Kiel, Germany; Jürgen Baumert, Max Planck Institute for Human Development, Germany |
### SYMPOSIUM: FEEL, TEACH, LEARN - HOW EMOTIONS FUEL LEARNING AND TEACHING IN HIGHER EDUCATION

**Chair**
Robert Kordts-Freudinger, Paderborn University, Germany

**Discussant**
Liisa Postareff, University of Helsinki, Finland

**Teacher education students’ emotions and their relevance for study commitment and life satisfaction**
Gerda Hagenauer, University of Bern, Switzerland; Michaela Glaesser-Zikuda, University of Erlangen-Nuremberg, Germany; Barbara Moschner, Carl von Ossietzky Universität Oldenburg, Germany; Nikoletta Lippert, University of Erlangen-Nuremberg, Germany; Melanie Bonitz, University of Erlangen-Nuremberg, Germany

**As the Mood Takes You: An Experimental Study of Emotions & Cognitive Processes during Text Learning**
Kristina Loderer, Ludwig-Maximilians-Universität (LMU), Germany; Christof Kuhbandner, University of Regensburg, Germany; Reinhard Pekrun, Ludwig-Maximilians-Universität (LMU), Germany

**Are angry lecturers perceived as understanding? Culture, emotion display, and personality judgement**
Julia Mendzheritskaya, Goethe-Universität Frankfurt, Germany; Miriam Hansen, Goethe-Universität Frankfurt, Germany

**Higher education teachers’ emotions: an intraindividual analysis on emotions and their antecedents**
Katharina Thies, Ostwestfalen-Lippe University of Applied Sciences, Germany; Robert Kordts-Freudinger, Paderborn University, Germany

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### SYMPOSIUM: EARLY NUMERICAL COMPETENCIES IN RELATION TO INFORMAL / HOME EXPERIENCES

**Chair**
Sophie Batchelor, Loughborough University, United Kingdom

**Discussant**
Tija Kleemans, Radboud University Nijmegen, Netherlands

**Exploring links between different measures of home numeracy environment and children’s number skills**
Amy Bennett, Loughborough University, United Kingdom; Camilla Gilmore, Loughborough University, United Kingdom; Matthew Inglis, Loughborough University, United Kingdom

**Children’s SFON in relation to their numerical utterances during informal picture book reading**
Sanne Rathé, KU Leuven, Belgium; Joke Torbeyns, KU Leuven, Belgium; Bert De Smedt, KU Leuven - University of Leuven, Belgium; Minna M Hannula-Sormunen, University of Turku, Finland; Lieven Verschaffel, KU LEUVEN, Belgium

**The role of picture book reading in early mathematics learning**
Iliada Elia, University of Cyprus, Cyprus; Marja van den Heuvel-Panhuizen, Utrecht University, Netherlands; Athanasios Sagatsis, University of Cyprus, Cyprus

**SES-related differences in Ecuadorian kindergartners’ early numerical abilities and SFON**
Joke Torbeyns, KU Leuven, Belgium; Gina Bojorque, KU Leuven, Belgium; Jo Van Hoof, KU LEUVEN, Belgium; Daniël Van Nijlen, KU LEUVEN, Belgium; Lieven Verschaffel, KU LEUVEN, Belgium
## SYMPOSIUM: TEACHERS’ ADAPTATIVE RESILIENCE PROCESS AT DIFFERENT CAREER STAGES

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<tr>
<th>Chair</th>
<th>Marold Wosnitza, RWTH Aachen University, Germany</th>
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<td>Discussant</td>
<td>Susan Beltman, Curtin University, Australia</td>
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### The development of a generic resilience model and its application to the teaching profession
Jennifer Schwarze, RWTH Aachen University, Germany; Marold Wosnitza, RWTH Aachen University, Germany

### Mentor teachers’ perceptions of Spanish pre-service teachers’ personal and professional competencies
Gloria Gratacos, C.U. Villanueva, Spain; Mariñ Barceló, C.U. Villanueva (affiliated with Universidad Complutense de Madrid), Spain; Inmaculada Rodriguez, C.U. Villanueva (affiliated with Universidad Complutense de Madrid), Spain; Miguel Alonso, C.u. Villanueva (affiliated with Universidad Complutense de Madrid), Spain

### Overcoming teacher induction challenges: The resilience process of Canadian novice teachers
Mylene Leroux, Université du Québec (Outaouais), Canada

### Impact of individual and contextual factors on Teachers’ Resilience and Commitment
Joana Pipa, University of Lisbon, Portugal; Francisco Peixoto, ISPA - Instituto Universitário / CIE - ISPA (Research Center in Education), Portugal; Marold Wosnitza, RWTH Aachen University, Germany; José Castro Silva, ISPA-Instituto Universitário, Portugal; Vera Faust, RWTH Aachen University, Germany; Jennifer Schwarze, RWTH Aachen University, Germany

## SYMPOSIUM: ON THE TRAJECTORIES OF RATIONAL NUMBER LEARNING

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<tr>
<th>Chair</th>
<th>Wim Van Dooren, KU LEUVEN, Belgium</th>
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<td>Discussant</td>
<td>Andreas Obersteiner, University of Education Freiburg, Germany</td>
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### Evaluating congruency and gap effects in fraction comparison
David Maximiliano Gomez Rojas, Universidad de Chile, Chile; Mabel Urutia, Universidad de Concepción, Chile; Pablo Dartnell, Universidad de Chile, Chile

### Individual differences in fractions’ conceptual and procedural knowledge at the secondary level
Xenia Varvakeoussi, University of Ioannina, Greece; Maria Bempeni, University of Ioannina, Greece; Stavroula Pouloulou, Athens University of Economics and Business, Greece

### From a naïve towards a scientifically correct concept of rational numbers: A longitudinal study
Jo Van Hoof, KU Leuven, Belgium; Lieven Verschaffel, KU Leuven, Belgium; Tine DeGrande, KU Leuven, Belgium; Wim Van Dooren, KU Leuven, Belgium

### Natural Number Bias when reasoning with rational numbers and unknown operands
Courtney Pollack, Vanderbilt University, United States; Konstantinos Christou, University of Western Macedonia, Greece; Jo Van Hoof, KU Leuven, Belgium; Wim Van Dooren, KU Leuven, Belgium
### Session L: 25
**Time:** 10:15-11:45  
**Location:** Virta - 114

#### INVITED SYMPOSIUM: MIGRATION AND EDUCATION FOR DEMOCRATIC CITIZENSHIP

**Chair**
Dorit Alt, Kinneret College on the Sea of Galilee, Israel

**Organisers**
Hermann J. Abs, University of Duisburg-Essen, Germany; Dorit Alt, Kinneret College on the Sea of Galilee, Israel

**Discussant**
Karin Heinrichs, Otto-Friedrich-University Bamberg, Germany

- **Ethnic Differences in Citizenship Competences among Middle School Students**  
  Anke Munnikama, University of Amsterdam, Netherlands

- **MANIFESTATIONS OF DEMOCRATIC VALUES IN LANGUAGE TEACHING FOR GROWN-UP REFUGEES AND IMMIGRANTS**  
  Aslaug Kristansen, University of Agder, Norway

- **Migration and education for democratic citizenship. Experiences with VaKE**  
  Alfred Weinberger, Pädagogische Hochschule der Diözese Linz, Austria; Jean-Luc Patry, University of Salzburg, Austria; Sieglinde Weyringer, University of Salzburg, Austria

- **Minority Youths’ Acculturation in the School Context and Education for Democratic Citizenship (EDC)**  
  Elena Makarova, University of Applied Sciences and Arts Northwestern Switzerland, Switzerland; Dina Birman, University of Miami, United States

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### Session L: 26
**Time:** 10:15-11:45  
**Location:** Main Building A - A2A

#### INVITED SYMPOSIUM: THE MORAL DIMENSION OF RELIGIOUS EDUCATION

**Chair**
Ulrich Riegel, University of Siegen, Germany

**Discussant**
Laura Hirsto, University of Eastern Finland, Finland

- **Value Learning Trajectories: Theory, Method, Context**  
  Liam Francis Gearon, University of Oxford, United Kingdom; Amika Kuusisto, University of Helsinki / University of Warwick, Finland

- **Value education in RE: Competencies and success criteria**  
  Konstantin Lindner, University of Bamberg, Germany

- **Moral Dilemmas in Iranian schools identified by students**  
  Nasibeh Hedayati, University of Helsinki, Finland; Elina Kuusisto, University of Helsinki, Finland; Kirsi Tirri, University of Helsinki, Finland

- **Beliefs in Afterlife: The Role of the Religious Background**  
  Dimitris Pnevmatikos, University of Western Macedonia, Greece; Triantafyllia Georgiadou, University of Western Macedonia, Greece
FRIDAY, 1 SEPTEMBER 2017

Session L: 27  
Time: 10:15-11:45  
Location: Main Building D - D11

INVITED SYMPOSIUM: MEET THE EARLI JOURNAL’S EDITORS

Chair
Äli Leijen, University of Tartu, Estonia

Discussant
Äli Leijen, University of Tartu, Estonia

Learning and Instruction
Jan Vermunt, University of Cambridge, United Kingdom

Educational Research Review
David Gijbels, University of Antwerp, Belgium

Frontline Learning Research
Erno Lehtinen, University of Turku, Finland

EARLI Book Series New perspectives on Learning and Instruction
Mien Segers, Maastricht University, Netherlands; Isabel Raemdonck, Université Catholique de Louvain, Belgium
Session L: 28  
Time: 10:15-11:45  
Location: Main Building A – A3

**SYMPOSIUM: DIFFERENTIATED INSTRUCTION TO ADDRESS STUDENT DIVERSITY IN LEARNING: EFFECTS, PRACTICES AND TRAINING**

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<td>Katrien Struyven, Vrije Universiteit Brussel, Belgium</td>
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<td>Leonidas Kyriakides, University of Cyprus, Cyprus</td>
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Cognitive effects of differentiation practices: A systematic review and meta-analysis  
Marjolein Deunk, University of Groningen, Netherlands; Annemieke Smae-Jacobse, University of Groningen, Netherlands; Hester de Boer, University of Groningen, Netherlands; Simone Doolaard, University of Groningen, Netherlands; Roel J. Bosker, Rijksuniversiteit Groningen, Dept of Education and GION, Netherlands

Differentiated instruction in mixed-age classes – Results from a study in small, alpine schools  
Robbert Smit, University of Teacher Education St. Gallen, Switzerland

Training primary education teachers to differentiate: Effects on teaching and student learning  
Evelyn Kroesbergen, Utrecht University, Netherlands; Eva van de Weijer-Bergsma, Utrecht University, Netherlands; Emilie Prast, Utrecht University, Netherlands; Johannes Van Luit, Utrecht University, Netherlands

Differentiated instruction in secondary education: Results from a professional development programme  
Wouter Smets, Karel de Grote University college, Belgium; Debbie Deneve, Karel de Grote Hogeschool Antwerpen, Belgium
**Session M: 1**

**Time:** 12:00-13:30

**Location:** Main Building C - C1

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**ROUNDTABLE: RT: ASSESSMENT AND TEACHER EDUCATION**

**Chair**

Christine Kreuzer, Ludwig-Maximilians-Universität (LMU), Germany

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**Teachers’ views on preparing students for university**

Merel van der Wal, Radboud University Nijmegen, Netherlands; Paulien Meijer, Radboud Teachers Academy, Netherlands

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**Assessing historical thinking: developing formative assessment tasks for historical causal reasoning**

Uddhava Rozendal, University of Amsterdam, Netherlands; Carla Van Boxtel, University of Amsterdam, Netherlands

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**Fostering a more motivating approach to assessment through video-based reflection**

Christa Krijgsman, Ghent University, Belgium; Tim Mainhard, Utrecht University, Netherlands; Jan van Tartwijk, Utrecht University, Netherlands; Lars Borghouts, Fontys University of Applied Sciences, Netherlands; Leen Haerens, Ghent University, Belgium
## Session M: 2

**Time:** 12:00-13:30  
**Location:** Main Building A - A34

### ROUNDTABLE: RT: LEARNING AND TEACHING IN CULTURALLY DIVERSE SETTINGS

<table>
<thead>
<tr>
<th>Chair</th>
<th>Topic</th>
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<tbody>
<tr>
<td>Judith Harackiewicz, University of Wisconsin-Madison, United States</td>
<td>Negotiating inclusive citizenship of Muslims through school–family partnership in Finland and Sweden</td>
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<td>Literacy development of Roma children over the summer break: Is it more than a socio-economic issue?</td>
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<td>Dacian Dolean, Babes-Bolyai University, Romania; Crina Damsa, University of Oslo, Norway</td>
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<td></td>
<td>Teacher perspectives on science literacy in multilingual classrooms – multidisciplinary explorations</td>
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<td>Maaide Hajer, HU University of Applied Sciences Utrecht, Netherlands; Clas Olander, Malmö University, Sweden; Birgitte Lund Nielsen, VIA University College, Denmark; Russell Tytler, Deakin University, Australia; Zuraini Ramli, Sultan Idris Education University, Malaysia</td>
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</tbody>
</table>

## Session M: 3

**Time:** 12:00-13:30  
**Location:** Main Building A - A31

### POSTER PRESENTATION: PO: TEACHER EDUCATION AND EDUCATIONAL TECHNOLOGY

<table>
<thead>
<tr>
<th>Chair</th>
<th>Topic</th>
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<tbody>
<tr>
<td>Markus Sauerwein, German Institute for International Educational Research (DIPF), Germany</td>
<td>Attitudes towards using App Inventor in schools. German teachers’ perspectives</td>
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<td>Armin Weinberger, Saarland University, Germany; Lara Johanna Schmitt, Saarland University, Germany</td>
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<td>Research and Status in Colleges of Education: The Teacher Educators’ Perspective</td>
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<td>Osnat Rubin, MOFET Institute, Israel</td>
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<td>Evaluating Usability Dimensions of a Mobile Augmented Reality App for History Learning</td>
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<td>Susanne Lajoie, McGill University, Canada; Jason Harley, University of Alberta, Canada; Amanda Jarrell, McGill University, Canada; Tara Tressel, McGill University, Canada; Laura Pipe, McGill University, Canada; Eric Poitras, University of Utah, United States</td>
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<td>Educational Technology in Personalized Schools: A survey and case studies in Swiss Secondary Schools</td>
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<td>Regina Schmid, Schwyz University of Teacher Education, Switzerland; Dominik Petko, Schwyz University of Teacher Education, Switzerland</td>
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<td>e-Learning in Secondary School Physics Investigations</td>
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<td>Darcy Fawcett, Gisborne Boys’ High School, New Zealand</td>
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<td>A system for automatic speech recognition and observation of classroom interactions</td>
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<td>Daniela Caballero, Universidad de Chile, Chile; Hanna Kronholm, University of Jyväskylä, Finland; André Mansikkaniemi, Aalto University, Finland; Jouni Viiri, University of Jyväskylä, Finland; Roberto Araya, Universidad de Chile, Chile; Pasi Pertilä, Tampere University of Technology, Finland; Tuomas Virtanen, Tampere University of Technology, Finland; Mikko Kurimo, Aalto University, Finland</td>
</tr>
</tbody>
</table>
POSTER PRESENTATION: PO: LEARNING AND DEVELOPMENT IN EARLY CHILDHOOD

Chair
Charalambos Charalambous, University of Cyprus, Cyprus

Preschool from Age Two: The perspectives of parents and teachers
Adriana Wiegnerová, Tomas Bata University, Czech Republic; Peter Gavora, Tomas Bata University, Czech Republic

Developing combinatorial reasoning among third grade pupils
Zsófia Gabriella Szabó, University of Szeged, Hungary; Erzsbeth Korom, University of Szeged, Hungary

Individual and environmental factors interacting in vocabulary of elementary school children
Christian Müller, Goethe-University Frankfurt, Germany; Sebastian Poloczek, bristol university, United Kingdom; Bettina Ritzbach, Goethe-Universität Frankfurt, Germany; Gerhard Buettner, University of Frankfurt, Germany

Oral text abilities of children attending kindergarten: development of a measurement instrument
Iris Dinkelmann, Thurgau University of Teacher Education, Switzerland; Katharina Kirchhofer, Thurgau University of Teacher Education, Switzerland; Claudia Hefti Christ, Thurgau University of Teacher Education, Switzerland; Dieter Isler, Thurgau University of Teacher Education, Switzerland

Playful assessment of cognitive development in young children
Corrie Urlings, Maastricht University, Netherlands; Karien Coppins, Maastricht University School of Business and Economics, Netherlands; Lex Borghans, Maastricht University School of Business and Economics, Netherlands

Print exposure, independent reading and reading fluency among Finnish school-aged children
Hanna Pöyilä, Niilo Mäki Institute, Finland; Paola Salmi, Niilo Mäki Institute, Finland; Mikko Aro, University of Jyväskylä, Finland

ANNOTATIONS:
THIS SESSION IS CHAIRMED BY TINA PAPATHOMA, REPLACING CHARALAMBOS CHARALAMBOUS.

ROUNDTABLE: RT: HIGHER EDUCATION

Chair
Marloes Nederhand, Erasmus University Rotterdam, Netherlands

Evolution of international traineeships in a South European University
Josepa Alemany-Costa, Pompeu Fabra University, Spain; Xavier Perramon, Universitat Politècnica de Catalunya, Spain

The Goals of Problem-based Learning through the Eyes of Educational Staff
Gerry Geitz, Stenden University of Applied Sciences, Netherlands

Why students go abroad (and so many others don't!): Exploring teacher candidates' motives
Frederik Ahlgrimm, University of Potsdam, Germany; Sebastian Heck, Universität Potsdam, Germany
### POSTER PRESENTATION: PO: ASSESSMENT METHODS AND TOOLS

<table>
<thead>
<tr>
<th>Chair</th>
<th>Assessing in partnership: involving students in formative assessment. Elly Vermunt, Zuyd University of Applied Sciences, Netherlands; Dominique Sluijsmans, Zuyd University of Applied Sciences, Netherlands</th>
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<tbody>
<tr>
<td></td>
<td>Comparing the consequences of various measurement error presentations in test score reports Dorien Hopster-den Otter, University of Twente, Netherlands; Saskia Wools, Cito, Netherlands; Theo Egggen, Cito/University of Twente, Netherlands; Bernard Veldkamp, University of Twente, Netherlands</td>
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<td>Symbolic number processing and mathematical achievement in adults Josétxu Orrantia, University of Salamanca, Spain; Laura Matilla, University of Salamanca, Spain; Rosario Sánchez, University of Salamanca, Spain; Sara San Romualdo, University of Salamanca, Spain; David Munez, National Institute of Education / Nanyang Technological University, Singapore; Lieven Verschaffel, KU Leuven, Belgium</td>
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<td>Procedural and Conceptual Knowledge: Problems in Definitions and Assessment Julia Erdmann, Ruhr University Bochum, Institute of Educational Research, Germany; Christian Hartmann, Ruhr University Bochum, Germany; Nikol Rummel, Ruhr University Bochum, Institute of Educational Research, Germany</td>
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<td>Translating between temporal representations for insight on human interaction Kristine Lund, University of Lyon, France; Matthieu Quignard, University of Lyon, France; David Shaffer, University of Wisconsin-Madison, United States</td>
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<td>When Strategic Graphical Interpretation Fails: The Influence of Prior Belief and Political Identity Ian Thacker, University of Southern California, United States; Robert Danielson, University of Southern California, United States; Gale Sinatra, University of Southern California, United States; Neil Jacobson, University of Southern California, United States</td>
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### POSTER PRESENTATION: PO: METACOGNITION AND WRITING

<table>
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<tr>
<th>Chair</th>
<th>Uncertainty monitoring of open-ended and true-false questions in primary school children</th>
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<tr>
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<td>Martina Steiner, University of Bern, Switzerland; Natalie Guggisberg, University of Bern, Switzerland; Mariette van Loon, University of Bern, Switzerland; Claudia Roebers, University of Bern, Switzerland</td>
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<td>Learners' Self-Regulatory Behaviour and its Relation to Designs of Blended Learning Environments.</td>
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<td>Stijn Van Laer, KU Leuven, Belgium; Jan Elen, KU Leuven, Belgium</td>
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<td>Integrating direct instruction and discovery learning based on Thinking-after-Instruction approach</td>
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<td>Tatsushi Fukaya, Gunma University, Japan; Yuri Uesaka, The University of Tokyo, Japan; Shin'ichi Ichikawa, University of Tokyo, Japan</td>
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<td>Development and automatization of the writing process in Chilean school students</td>
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<td>Elvira Jeldrez, Universidad de Chile, Chile; Carmen Sotomayor, Universidad de Chile, Chile; David Maximiliano Gomez Rojas, Universidad de Chile, Chile</td>
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<td></td>
<td>A cognitive perspective of how authors and author-to-be describe their writing processes</td>
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<td>Victoria Johansson, Lund University, Sweden</td>
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<td>Socially Shared Metacognition in a Project Based Learning Environment: A Comparison Study</td>
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<td>Nikki Lobczowski, University of North Carolina at Chapel Hill, United States; Kayley Lyons, University of North Carolina at Chapel Hill, United States; Jacqui McLaughlin, University of North Carolina at Chapel Hill, United States; Jeff Greene, University of North Carolina, United States</td>
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**Annotations:**

This session is chaired by Jonna Malmberg, replacing Sanna Järvelä. The presentation by Victoria Johansson (a Cognitive Perspective of How Authors and Author-to-be Describe Their Writing Processes) is moved to Session C:13.
# POSTER PRESENTATION: PO: ASSESSMENT AND EVALUATION

**Chair**  
Mathias Mejeh, University of Zurich, Switzerland

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Institution 1</th>
<th>Institution 2</th>
<th>Institution 3</th>
<th>Institution 4</th>
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<tr>
<td>Developing Skills Development Monitoring System (SISDECOM): A Multiple-case Study</td>
<td>Maria Soledad Ibarra Saiz, EVALfor Research Group - University of Cadiz, Spain; Gregorio Rodríguez Gómez, EVALfor Research Group - University of Cadiz, Spain</td>
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<td>Teacher Training in Mexico: a model to evaluate learning transfer</td>
<td>Miren Fernández, University of the Balearic Islands, Spain; Carla Quesada-Pallarès, Universitat de Manresa, Spain; Anna Ciraso, Universitat Autònoma de Barcelona, Italy; Edith Mariana Rebollar Sánchez, Instituto Superior de Ciencias de la Educación del Estado de México, Mexico</td>
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<td>A proposal for assessment of skills using complex tasks in virtual learning environments</td>
<td>Jaione Cubero Ibáñez, EVALfor Research Group - University of Cadiz, Spain; Maria Soledad Ibarra Saiz, EVALfor Research Group - University of Cadiz, Spain; Gregorio Rodríguez Gómez, EVALfor Research Group - University of Cadiz, Spain</td>
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<td>Engaging students in feedback processes: Challenges and opportunities</td>
<td>Jessica To, The University of Hong Kong, China</td>
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<td>Student perceptions of achievement, self-efficacy, self-regulation and feedback in Mathematics</td>
<td>Siv M. Gamleim, Volda University College, Norway; Lars Kvinge, Stord/Haugesund University College, Norway; Kari Smith, Norwegian University of Science and Technology, Norway; Knut Steinar Engelsen, Stord/ Haugesund University College, Norway</td>
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<td>New Mathematical Model for Analyzing Accuracy of Teachers' Predictions About Student Competencies</td>
<td>Yuri Uesaka, University of Tokyo, Japan; Masanori Nakagawa, Otsuma Women’s University, Japan; Kazuhiro Yamaguchi, The University of Tokyo, Japan; Hidekazu Kaminishi, Dokkyo Medical University, Japan; Kae Nakaya, University of Tokyo, Japan; Tatsushi Fukaya, Gunma University, Japan</td>
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**Annotations:**
**Important Notice:** This session will take place in Room Pinni B - B4115.

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# ROUNDTABLE: RT: PROFESSIONAL DEVELOPMENT AND NEUROSCIENCE

**Chair**  
Chiel van der Veen, VU University Amsterdam, Netherlands

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Institution 1</th>
<th>Institution 2</th>
<th>Institution 3</th>
<th>Institution 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>From neurons to nations and back: Translating across levels of explanation in educational research</td>
<td>Lennart Schaik, ETH Zurich, Switzerland; Joshua McGrane, University of Oxford, United Kingdom; Peter Edelsbrunner, ETH Zurich, Switzerland; Roland H. Grabner, University of Graz, Austria; Samuel Greiff, University of Luxembourg, Luxembourg; Manu Kapur, ETH Zurich, Switzerland; Tommi Kokkonen, University of Helsinki, Finland; Alexander Renkl, University of Freiburg, Institute of Psychology, Germany; Elsbeth Stern, ETH Zurich, Switzerland</td>
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<td>Learning to do the right thing: Learning social and ethical accountability</td>
<td>Leonie Beatrice Jacob, University of Regensburg, Germany; Vasudha Chaudhari, Open University, United Kingdom; Allison Littlejohn, Open University, United Kingdom; Regina Mulder, University of Regensburg, Germany</td>
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<td>Evaluating the Impact of Learning from Incidents</td>
<td>Victoria Murphy, Open University, United Kingdom; Allison Littlejohn, Open University, United Kingdom; Bart Rienties, Open University, United Kingdom</td>
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**FRIDAY, 1 SEPTEMBER 2017**

178
### POSTER PRESENTATION: PO: INSTRUCTIONAL DESIGN AND INQUIRY LEARNING

**Chair**  
Tim Kühl, University of Mannheim, Germany

**"I am a scientist in a virtual lab": A computer supported inquiry learning environment**  
Ioie Nicolaidou, Cyprus University of Technology, Cyprus; Christy Spyrou, Cyprus University of Technology, Cyprus; Christiana Nicolaou, Center for Educational Research and Evaluation, Cyprus

**Designing games: The association(s) between game mechanics, players’ roles and collaboration**  
Raija Hamalainen, University of Jyväskylä, Finland; Timo Lainema, University of Turku, Finland; Mikko Niilo-Rämä, University of Jyväskylä, Finland

**Effect of cognitive and metacognitive scaffolds on reading in digital learning environments**  
Leonie Brummer, University of Groningen, Netherlands; Marlies ter Beek, University of Groningen, Netherlands; Anouk Donker, GION - University of Groningen, Netherlands; Marie-Christine Opdenakker, University of Groningen, Netherlands

**Understanding the student-student interaction processes in technology-enhanced physics learning**  
Joni Lämsä, University of Jyväskylä, Finland; Raija Hamalainen, University of Jyväskylä, Finland; Jouli Viiri, University of Jyväskylä, Finland

**A model of Media supported Inquiry-based Learning**  
Julian Dehne, University of Potsdam, Germany; Thi Nguyen, University of Potsdam, Germany; Ulrike Lucke, University of Potsdam, Germany

**The development of students’ situational interest across various science domains**  
Erkka Laine, University of Turku, Finland; Tomi Jaakkola, University of Turku, Finland

**ANNOTATIONS:**  
The presentation by Raija Hamalainen (Designing games: The association(s) between game mechanics, players’ roles and collaboration) is cancelled.
### POSTER PRESENTATION: PO: SOCIAL INTERACTION IN LEARNING AND INSTRUCTION

<table>
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<tr>
<th>Chair</th>
<th>Personal English Learning Ecologies and Meaningful Input with Digital and Non-Digital Artefacts</th>
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<td>Michel Cabot, Western Norway University of Applied Sciences, Norway</td>
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</table>

#### Teachers' decision-making and reasoning: how consistent are their planned and interactive decisions?

Bas Agricola, Utrecht University, Netherlands; Frans Prins, Utrecht University, Netherlands; Marieke van der Schaaf, Utrecht University, Netherlands; Jan van Tartwijk, Utrecht University, Netherlands

#### Enhancing connected learning through OpenForest: First-year teacher education students’ design ideas

Henriikka Vahtianen, University of Eastern Finland, Finland; Petteri Vanninen, University of Eastern Finland, Finland; Saara Niissinen, University of Eastern Finland, Finland; Sinikka Pöllänen, University of Eastern Finland, Finland

#### From experimental research to educational and psychological practices: “IDIOME” a computerized tool

Jamila Hattouti, CNRS - University of Poitiers, France; Sandrine Gil, University of Poitiers, France; Virginie Laval, University of Poitiers, France

#### Case-based portraits of micro-interaction patterns during online collaborative problem solving

Johanna Pöysä-Tarhonen, University of Jyväskylä, Finland; Esther Care, The Brookings Institution, United States; Nafisa Awwal, University of Melbourne, Australia; Päivi Hääkinen, University of Jyväskylä, Finland

#### Effects of Task Design during Collaborative Problem Solving using the Knowledge Constructive Jigsaw

Miho Kawasaki, Shizuoka University, Japan; Hiroyuki Masukawa, Shizuoka University, Japan; Ikuo Endo, Tajima Junior High School, Japan

**ANNOTATIONS:**

**IMPORTANT NOTICE:** THIS SESSION WILL TAKE PLACE IN ROOM MAIN BUILDING A - A05.
**POSTER PRESENTATION: PO: TEACHER EDUCATION AND MOTIVATION**

| Chair                  | Comparison of teaching motivations and perceptions of male and female Estonian preservice teachers  
|                       | Merle Taimalu, University of Tartu, Estonia; Piret Luik, University of Tartu, Estonia     
|                       | Propitious conditions for case-based learning with classroom videos: the participants’ perspective  
|                       | Manuela Frommelt, University of Teacher Education of Lucerne, Switzerland; Isabelle Hugener, University of Teacher Education Lucerne (PH Luzern), Switzerland; Kathrin Krammer, University of Teacher Education Lucerne, Switzerland     
|                       | Novice teachers in the Czech Republic: Why do they leave and change schools?  
|                       | Eva Minarikova, Masaryk University, Czech Republic; Svetlana Hanusova, Faculty of Education, Masaryk University, Brno, Czech Republic; Klara Ulíčna, Faculty of Education, Masaryk University, Brno, Czech Republic; Miroslav Janík, Faculty of Education, Masaryk University, Brno, Czech Republic; Tomas Janík, Faculty of Education, Masaryk University, Czech Republic; Jan Mares, Faculty of Education, Masaryk University, Brno, Czech Republic; Tomas Kohoutek, Faculty of Education, Masaryk University, Brno, Czech Republic     
|                       | A video portfolio for the summative assessment of pre-service teachers’ teaching competences  
|                       | Kerstin Baueerlein, University of Applied Sciences Northwestern Switzerland, Switzerland; Urban Fraefel, University of Applied Sciences Northwestern Switzerland, Switzerland     
|                       | School-university partnerships in Initial Teacher Education. The model “School Adoption”  
|                       | Andreas Bach, University of Salzburg, Austria     
|                       | Evidence-based optimization of a learning setting to support professional vision  
|                       | Victoria L. Barth, Freie Universität Berlin, Germany; Valentina Piwowar, Freie Universität Berlin, Germany; Diemut Ophardt, Technische Universität Berlin, Germany; Katharina Krysmanski, Freie Universität Berlin, Germany; Irina Rosa Kumschick, Freie Universität Berlin, Germany; Felicitas Thiel, Freie Universität Berlin, Germany     

**ANNOTATIONS:**  
THE PRESENTATION BY VICTORIA BARTH (EVIDENCE-BASED OPTIMIZATION OF A LEARNING SETTING TO SUPPORT PROFESSIONAL VISION) IS CANCELLED.
### Session M: 13  
**Time:** 12:00-13:30  
**Location:** Pini B - B3109

#### ROUNDTABLE: RT: TEACHING APPROACHES

**Chair**  
Sandra Lammerding, University of Cologne, Germany

**The role of language in content-area learning – conceptual frameworks and their underpinnings**  
Sari Sulkunen, University of Jyväskylä, Finland; Johanna Saario, University of Jyväskylä, Finland; Tarja Nikula, University of Jyväskylä, Finland; Mirja Tamanen, University of Jyväskylä, Finland; Merja Kauppinen, University of Jyväskylä, Finland; Eija Aalto, University of Jyväskylä, Finland

**How can we measure elementary school teachers’ language-support skills?**  
Birgit Hepp, Humboldt-Universität zu Berlin, Germany; Katrin Gabler, Humboldt-Universität zu Berlin, Germany; Sofie Henschel, Humboldt Universität zu Berlin, Germany

**Integrating Grammatical Knowledge in Foreign Language Teaching in Higher Education**  
Eva Nélz, University of Education Freiburg, Germany

### Session M: 14  
**Time:** 12:00-13:30  
**Location:** Main Building A - A08

#### ROUNDTABLE: RT: EDUCATIONAL EFFECTIVENESS AND PHENOMENOGRAPHY

**Chair**  
Susan Beltman, Curtin University, Australia

**The existence of Science and Engineering Practices in Making Activities**  
Adam Maltese, Indiana University, United States; Amber Simpson, Indiana University, United States

**Nursing students’ preconceptions of their Bachelor’s Thesis process**  
Ani Hentonon, Sophiahemmet University College, Sweden; Marianne Terås, Stockholms universitet, institutionen för pedagogik och didaktik, Sweden; Margareta Westerbotn, Sophiahemmet Högskola, Sweden; Max Schëja, Stockholm University, Sweden; Björn Fossum, Sophiahemmet Högskola, Sweden

**How to assess numerical competences differentially in secondary education?**  
Katharina Lambert, University of Tübingen, Germany; Tanja Dackermann, Knowledge Media Research Center, Germany; Korbinian Moeller, Leibniz-Institut für Wissensmedien, Germany
Session M: 15 | Time: 12:00-13:30 | Location: Pinni B - B3117

**POSTER PRESENTATION: PO:** HIGHER EDUCATION AND MIXED-METHOD RESEARCH

**Chair**
Minna M Hannula-Sormunen, University of Turku, Finland

**Developing self-regulated learning skills: A longitudinal study with higher education students**
Elisabeth Müller, University of Applied Sciences and Arts Northwestern Switzerland, Switzerland

**A questionnaire for assessing the learning approaches of university chemistry students: ChemApproach**
Mika Lastusaari, University of Turku, Finland; Eero Laakkonen, University of Turku, Finland; Mari Murtonen, University of Turku, Finland

**Explaining the Silence on Ethics in Doctoral Examination**
Allyson Holbrook, SORTI, The University of Newcastle, Australia; Kerry Dally, SORTI, The University of Newcastle, Australia; Carol Avery, SORTI, The University of Newcastle, Australia; Terence Lovat, The University of Newcastle, Australia; Hedy Fairbairn, SORTI, The University of Newcastle, Australia

**Learning Analytics Features Self-regulated Learners Prefer for Learning**
Clara Schumacher, University of Mannheim, Germany; Dirk Ifenthaler, University of Mannheim, Germany

**Understanding student engagement in the universities across the Greater China**
Lily Min Zeng, The University of Hong Kong, Hong Kong; Luke K. Fryer Fryer, The University of Hong Kong, Hong Kong; Maggie Yue Zhao, The University of Hong Kong, Hong Kong; Yan Luo, Tsinghua University, China; Christine A. Armatas, The Hong Kong Polytechnic University, Hong Kong; Wai Yin Ng, The Chinese University of Hong Kong, Hong Kong; Gordon Y. N. Tang, Hong Kong Baptist University, Hong Kong

**Upper secondary school subject choices: Critical bottlenecks of the Finnish education system**
Satu Kaleva, University of Oulu, Finland; Jouni Pursiainen, University of Oulu, Finland; Hanni Muukkonen, University of Oulu, Finland

Session M: 16 | Time: 12:00-13:30 | Location: Main Building D - D14

**ROUNDTABLE: RT:** SOCIAL INTERACTION IN LEARNING AND INSTRUCTION

**Chair**
Lorna Bourke, Liverpool Hope University, United Kingdom

**Socially-shared metacognition processes of 7th graders throughout science museum context in Turkey**
Gamze Türkmen, Middle East Technical University, Turkey; Zahiye YILDIRM, Middle East Technical University, Turkey

**Impact of learning goals and protagonists’ behavior on interactions in and effectiveness of tutoring**
Stephanie Herppich, University of Freiburg, Germany; Joerg Wittwer, University of Freiburg, Germany

**Teachable moments in early childhood classrooms: Operationalizing key features and boundaries**
Mayra Mascareño, University of Groningen, Netherlands; Marjolein Deunk, University of Groningen, Netherlands; Catherine Snow, Harvard Graduate School of Education, United States
ROUNDTABLE: RT: TEACHER EFFECTIVENESS

<table>
<thead>
<tr>
<th>Chair</th>
<th>Exploring Constructivist Beliefs and Practices in an Alternative Route to Licensure Program</th>
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<tbody>
<tr>
<td>Tracy Zou, The University of Hong Kong, Hong Kong</td>
<td>Jori Beck, Old Dominion University, United States; Steve Hayden, University of Nevada, Las Vegas, United States; Tara Piachowski, University of Nevada, Las Vegas, United States; Christina Santoyo, University of Nevada, Las Vegas, United States; Chyllis Scott, University of Nevada, Las Vegas, United States</td>
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<td>Supporting learning and social cohesion through arts education.</td>
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<td>Interventions in Finnish schools</td>
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<td>Marja-Leena Juntunen, University of the Arts Helsinki, Finland; Minna Törmänen, University of Helsinki, Finland; Heidi Partti, University of the Arts Helsinki, Finland; Lisa Jaakonaho, Theatre Academy of the University of the Arts, Finland; Eeva Anttila, University of the Arts Helsinki, Finland; Mari Tervaniemi, University of Helsinki, Finland; Kaisa Tiippana, University of Helsinki, Finland; Tanja Linnavalli, University of Helsinki, Finland; Isto Turpeinen, University of the Arts Helsinki, Finland; Anniina Suominen, Aalto University, Finland; Riku Saastamoinen, University of the Arts Helsinki, Finland</td>
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<td>Governing teacher education – The effectiveness of cooperative structures and coherent curricula</td>
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<td>Katharina Hellmann, University of Education Freiburg, Germany; Hans-Georg Kotthoff, Pädagogische Hochschule Freiburg, Germany</td>
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ROUNDTABLE: RT: HIGHER EDUCATION AND WRITING

<table>
<thead>
<tr>
<th>Chair</th>
<th>When universities take over states: an introduction to &quot;academic capture&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catherine Simon, Bath Spa University, United Kingdom</td>
<td>Mihaylo Milovanovitch, Center for Applied Policy, Austria; Arevik Anapiosyan, Yerevan State University and Center for Applied Policy, Armenia; Elena Denisova-Schmidt, University of St. Gallen, Switzerland</td>
</tr>
<tr>
<td></td>
<td>Mining Student Peer Reviews: Cross-Cultural Perspectives</td>
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<td></td>
<td>Djuddah Leijen, University of Tartu, Estonia; Christopher Anson, North Carolina State University, United States; Joseph Moxley, USF, United States; Anna Wärmsby, Malmö University, Sweden; Asko Kauppinen, Malmö University, Sweden; Roger Yallop, University of Tartu, Estonia</td>
</tr>
<tr>
<td></td>
<td>Research, Representation and Obstructionism: National-Others in the Japanese University</td>
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<td></td>
<td>Damian Rivers, Future University Hakodate, Japan</td>
</tr>
</tbody>
</table>
### ROUNDTABLE: RT: METACOGNITION, GRAPHICS AND REASONING

**Chair**  
Maria A. Flores, University of Minho, Portugal

- **Metacognitive knowledge and creative process: a comparative qualitative study in three art fields**  
  Violeta Vainer, FLACSO, Argentina

- **Using a graphic organizer to improve comprehension and recall of a medical guidance text**  
  Ely Kozminsky, Ben-Gurion University of the Negev, Israel; Shani Amar, Ben-Gurion University, Israel

- **Characterizing and Promoting Secondary Students’ Reasoning about Evidence in Science**  
  Guanzhong Ma, The University of Hong Kong, China; Jan van Aalst, The University of Hong Kong, Hong Kong

### POSTER PRESENTATION: PO: TEACHING AND TEACHER EFFECTIVENESS

**Chair**  
Alberto Cattaneo, Swiss Federal Institute for Vocational Education and Training, Switzerland

- **Design thinking: Teachers’ approaches to creating learning experiences for their students**  
  Lori Lockyer, University of Technology Sydney, Australia; Sue Bennett, University of Wollongong, Australia; Shirley Agostinho, University of Wollongong, Australia

- **All on Board! Successful School-Family Partnerships in Schools with Personalized Learning Concepts**  
  Rita Stebler, University of Zurich, Switzerland; Katriona Vasarik Staub, University of Zurich, Switzerland

- **Parent’s attitudes and expectations and home practices in the development of early numeracy skills**  
  Javier Rosales, University of Salamanca, Spain; Blanca Hernández, University of Salamanca, Spain; Marta Ramos, Salamanca University, Spain

- **An exploratory study of pre-service teachers’ relational beliefs and relational self-efficacy**  
  Anne Milatz, University of Jena, Germany

- **Do preservice teachers benefit from peer feedback when analyzing video-based classroom situations?**  
  Nicola Meschede, Goethe-Universität Frankfurt, Germany; Katja Adl-Amini, Goethe-Universität Frankfurt, Germany; Ilonca Hardy, Goethe-Universität Frankfurt, Germany

- **Fostering Subject-Specific Diagnostic Skills? Insights from English as a Foreign Language**  
  Judith Sebastiani, University of Koblenz - Landau, Germany
### ROUNDTABLE: RT: TEACHING AND TEACHER EDUCATION

**Chair**  
Mieke Koeslag-Kreunen, Netherlands

**Do extraverts get better grades? Student personality factors and teacher-assigned grades**  
Andrea Westphal, University of Potsdam, Germany; Miriam Vock, Universität Potsdam, Germany

**Teacher students’ social and emotional competences: Development of a research-based training program**  
Bastian Carstensen, Leibniz Institute for Science and Mathematics Education (IPN), Germany; Uta Klusmann, Leibniz Institute for Science and Mathematics Education (IPN), Germany; Michaela Köller, Institute for Psychology of Learning and Instruction, Kiel University, Germany

**The added value of research-based teacher education on teachers’ roles in primary schools**  
Luce Claessens, Utrecht University, Netherlands; Frans Prins, Utrecht University, Netherlands; Chris Phielix, Utrecht University, Netherlands

**ANNOTATIONS:**  
THE ROUNDTABLE PRESENTATION BY BASTIAN CARSTENSEN (TEACHER STUDENTS’ SOCIAL AND EMOTIONAL COMPETENCES: DEVELOPMENT OF A RESEARCH-BASED TRAINING PROGRAM) IS CANCELLED.
POSTER PRESENTATION: PO: LEARNING IN EARLY CHILDHOOD

Chair
Bert Slof, Utrecht University, Netherlands

Relations between pre-schoolers’ family background and kindergarten quality
Jennifer Lambrecht, University of Potsdam, Germany; Helvi Koch, Universität Potsdam, Germany; Guido Nottbusch, University of Potsdam, Germany; Nadine Spörer, University of Potsdam, Germany

A Review of Multiliteracies Pedagogy in Primary Classrooms
Pirjo Kulju, University of Tampere, Finland; Reijo Kupiainen, University of Tampere, Finland; Anne Jyrkäinen, University of Tampere, Finland; Kirsii-Liisa Koskinen-Sinisalo, University of Tampere, Finland; Marita Mäkinen, University of Tampere, Finland; Angela Wiseman, NC State University, United States

Monitoring quality of playgroups in Portugal: A mixed-method approach
Vanessa Russo, University Institute of Lisbon (ISCTE - IUL), Portugal; Joana Alexandre, University Institute of Lisbon (ISCTE-IUL), Portugal; Maria Clara Barata Almeida, Faculdade de Psicologia e de Ciências da Educação da Universidade de Coimbra, Portugal; Catarina Leitão, Faculdade de Psicologia e de Ciências da Educação da Universidade de Coimbra, Portugal; Bruno de Sousa, Faculdade de Psicologia e de Ciências da Educação da Universidade de Coimbra, Portugal

The friendship network stability of preschool children during one pedagogical season
Yili Wang, University of Turku, Finland; Jarmo Kinos, University of Turku, Finland; Tuire Palonen, University of Turku, Finland; Tarja-Riitta Hurme, University of Turku, Finland

Effects of an early childhood intervention: Evidence from the German program Chancenreich
Juliane Schünke, Freie Universität Berlin, Germany; Yvonne Anders, Freie Universität Berlin, Germany; Franziska Cohen, Freie Universität Berlin, Germany; Hannah Ulferts, Freie Universität Berlin, Germany

Observations of physical activity and classroom structure in nature and traditional kindergartens
Joshua Meyer, University of Victoria, Canada

ANNOTATIONS:
The presentation by Joshua Meyer (observations of physical activity and classroom structure in nature and traditional kindergartens) is cancelled.
The presentation by Yili Wang (the friendship network stability of preschool children during one pedagogical season) is cancelled.

ICT DEMONSTRATION: INTRODUCING A SOCIAL NETWORK ANALYSIS TOOLKIT FOR SOCIALLY RESPONSIVE CLASSROOMS

Chair
Paula De Barba, The University of Melbourne, Australia

Introducing a social network analysis toolkit for socially responsive classrooms
Christoforos Mamas, University of California, San Diego, United States; Alan Daly, University of California, San Diego, United States; Giovanna Schaeili, University of Zurich, Switzerland

ANNOTATIONS:
The presentation by Christofer Mamas (introducing a social network analysis toolkit for socially responsive classrooms) is cancelled.
<table>
<thead>
<tr>
<th>Session M: 24</th>
<th>Time: 12:00-13:30</th>
<th>Location: Pinni B - B4117</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICT DEMONSTRATION: A SECOND LIFE ENVIRONMENT TO TRAIN MATHEMATICAL ACTING IN THE CONTEXT OF NURSING.</td>
<td></td>
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<tr>
<td>Chair</td>
<td>Sebastian Kuntze, Ludwigshburg University of Education, Germany</td>
<td>A Second Life environment to train Mathematical Acting in the Context of Nursing. Diana P. Zwart, Windesheim University of Applied Sciences, Netherlands; Sui Lin Goei, Windesheim University of Applied Sciences, Netherlands; Omid Noroozi, Tarbiat Modares University, Iran; Johannes Van Luit, Utrecht University, Netherlands</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Session M: 25</th>
<th>Time: 12:00-13:30</th>
<th>Location: Main Building C - C2</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICT DEMONSTRATION: COHVIS. AUTOMATED CONCEPT MAP FEEDBACK FOR WRITING COHESIVE TEXTS</td>
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<tr>
<td>Chair</td>
<td>Jasperina Brouwer, University of Groningen, Netherlands</td>
<td>Cohvis. Automated concept map feedback for writing cohesive texts Christian Burkart, University of Freiburg, Germany; Andreas Lachner, University of Tübingen, Germany; Matthias Nückles, University of Freiburg, Germany</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>KEYNOTES - PART 3:1</th>
<th>Time: 13:45-15:15</th>
<th>Location: Tampere Hall - Big Auditorium</th>
</tr>
</thead>
<tbody>
<tr>
<td>EARLI KEYNOTE SESSION: A CRITICAL ANALYSIS OF STUDENT APPROACHES TO LEARNING IN THE LIGHT OF RECENT EMPIRICAL EVIDENCE</td>
<td></td>
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<tr>
<td>Chair</td>
<td>Eero Ropo, University of Tampere, Finland</td>
<td>A Critical Analysis of Student Approaches to Learning in the Light of Recent Empirical Evidence Sari Lindblom, University of Helsinki, Finland</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>KEYNOTES - PART 3:2</th>
<th>Time: 13:45-15:15</th>
<th>Location: Main Building A - Main Auditorium</th>
</tr>
</thead>
<tbody>
<tr>
<td>EARLI KEYNOTE SESSION: A UNIFIED MODEL OF TASK-SPECIFIC MOTIVATION</td>
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<tr>
<td>Chair</td>
<td>Marold Wosnitza, RWTH Aachen University, Germany</td>
<td>A Unified Model of Task-Specific Motivation Cornelis de Brabander, Leiden University, Netherlands; Rob Martens, Open University of the Netherlands, Netherlands</td>
</tr>
</tbody>
</table>
KEYNOTES - PART 3:3
Time: 13:45-15:15
Location: Tampere Hall - Small Auditorium

EARLI KEYNOTE SESSION: PREPARING LIFELONG LEARNERS. STUDENT LEARNING IN HIGHER EDUCATION AND BEYOND

Chair
Anneli Eteläpelto, University of Jyväskylä, Finland

Preparing Lifelong Learners. Student Learning in Higher Education and Beyond
David Gijbels, University of Antwerp, Belgium

Session N: 1
Time: 15:45-17:15
Location: Pinni A - A3103

SINGLE PAPER: RESEARCHER EDUCATION AND CAREERS - B

Chair
Olga Kasatkina, Université Grenoble Alpes, France

Comparative study of researcher community and support among Finnish and Danish PhD-students
Soren Bengtsen, Aarhus University, Denmark; Solveig Cornér, University of Helsinki, Finland; Jouni Peltonen, University of Oulu, Finland; Kirsi Pyhältö, University of Oulu / University of Helsinki, Finland

What are the most positive and negative significant events in the doctoral journey?
Eva Lieza, Ramon Llull University, Spain; Gabriela González Ocampo, Ramon Llull University, Spain; Mariona Corcelles, Universitat Ramon Llull, Spain; Maribel Cano, Universitat Ramon Llull, Spain; Montserrat Castelló, Ramon Llull University, Spain

Trust Me! Mapping vulnerability and trust building in doctoral student-supervisor relationships.
Kay Guccione, University of Sheffield, United Kingdom

The doctoral supervisor journey: experiences and feelings
Gabriela González Ocampo, Ramon Llull University, Spain; Montserrat Castelló, Ramon Llull University, Spain

ANNOTATIONS:
The presentation by Gabriela González Ocampo (The doctoral supervisor journey: experiences and feelings) is cancelled.
### Session N: 2 | Time: 15:45-17:15 | Location: Main Building C - C6

**SINGLE PAPER: MOTIVATION AND EMOTION - I**

<table>
<thead>
<tr>
<th>Chair</th>
<th>Who are these bored students? Profiles of learning emotions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tim van der Zee, Leiden University, Netherlands</td>
<td>Dirk Tempelaar, Maastricht University, Netherlands; Alexandra Niculescu, European Respiratory Society, Switzerland</td>
</tr>
</tbody>
</table>

| Gendered math career expectations: do perceptions of teacher support and expectations matter? | Doriane Jaegers, University of Liège, Belgium; Dominique Lafontaine, Université de Liège, Belgium |
| Can a dot-probe task reliably detect attentional bias in students with test anxiety? | Wendy Symes, University of Birmingham, United Kingdom; Dave Putwain, Liverpool John Moores University, United Kingdom |

| Time perspective development related to importance attached to school by parents and friends | Thea Peetsma, University of Amsterdam, Netherlands; Jaap Schuitema, University of Amsterdam, Netherlands; Ineke van der veen, Kohnstamm Institute, University of Amsterdam, Netherlands |

### Session N: 3 | Time: 15:45-17:15 | Location: Pinni B - B1097

**SINGLE PAPER: PROFESSIONAL DEVELOPMENT AND VOCATIONAL EDUCATION**

<table>
<thead>
<tr>
<th>Chair</th>
<th>Professional situation of gifted adults. Career biography, job position and job satisfaction</th>
</tr>
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<tbody>
<tr>
<td>Markus P. Neuenschwander, University of Applied Sciences and Arts Northwestern Switzerland, Switzerland</td>
<td>Kristina Kögler, University of Hohenheim, Germany; Maren Schlegler, Goethe-Universität Frankfurt, Germany; Eveline Wuttke, Goethe-Universität Frankfurt, Germany</td>
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</tbody>
</table>

| One-to-one assessment interviews: Building teachers’ expertise in understanding mathematical thinking | Doug Clarke, Australian Catholic University, Australia; Barbara Clarke, Monash University, Australia |
| Vocationally educated graduates moving on from education to the labour market: A systematic review | Eva Vermeire, KU Leuven, Belgium; Nele De Cuyper, KU LEUVEN, Belgium; Eva Kyndt, KU LEUVEN, Belgium |

<p>| Development of English competency at vocational schools depending on number of lessons and job field | Carolin Raetzer, University of Hagen, Germany; Kathrin Jonkmann, FernUniversitaet in Hagen, Institut fuer Psychologie, Germany |</p>
<table>
<thead>
<tr>
<th>Chair</th>
<th>Motivation, well-being and transactional patterns in the prevention of unqualified academic drop-out</th>
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</thead>
<tbody>
<tr>
<td>James Kwan, Lancaster University, Singapore</td>
<td>Elke Baten, University of Ghent, Belgium; MarieClaire Vandevelde, Ghent University, Belgium; Edwin Hantson, Ghent University, Belgium; Brigitte Decraene, Ghent University, Belgium; Annemie Desoete, Ghent University &amp; Artevelde University College, Belgium</td>
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<td>What types of life purposes do Finnish Bachelor of social service students identify with?</td>
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<td>Niina Manninen, University of Helsinki, Finland; Elina Kuusisto, University of Helsinki, Finland; Kirsi Tirri, University of Helsinki, Finland</td>
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<td>Exploring factors in student engagement that predict low versus high academic performance</td>
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<td>Sarah Davis, University of Victoria, Canada; Rebecca Edwards, University of Victoria, Canada; Allyson Hadwin, University of Victoria, Canada; Todd Milford, University of Victoria, Canada</td>
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<td>Do students’ beliefs about errors vary as a function of their achievement goal orientation profiles?</td>
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<td>Antti Pullkka, National Defence University, Finland; Heta Tuominen, University of Helsinki, Finland; Maria Tullis, University of Augsburg, Austria; Anna Tapola, University of Helsinki, Finland; Markku Niemivirta, University of Oslo, Norway</td>
</tr>
</tbody>
</table>

**ANNOTATIONS:**
THE PRESENTATION BY ELKE BATEN (MOTIVATION, WELL-BEING AND TRANSACTIONAL PATTERNS IN THE PREVENTION OF UNQUALIFIED ACADEMIC DROP-OUT) IS CANCELLED AND REPLACED BY MANFRED L. PIRNER (COHERENCE IN PLURALISTIC SOCIETIES AND PUBLIC EDUCATION. A FRAMEWORK BASED ON RAWLS AND HABERMAS).
### SINGLE PAPER: INSTRUCTIONAL DESIGN - F

**Chair**  
Kiran Vanbinst, KU LEUVEN, Belgium

**Impact of scientific experiments on students’ knowledge – A performance test on geometrical optics**  
Sonja Franziska Christina Wenzel, Goethe-Universität Frankfurt, Germany; Mark Ullrich, Goethe University Frankfurt, Germany; Holger Horz, Goethe-University Frankfurt, Institute of Psychology, Germany; Jeremias Weber, Goethe-University Frankfurt, Institute of Physics, Germany; Jan Winkelmann, Goethe-University Frankfurt, Institute of Physics, Germany; Roger Erb, Goethe-University Frankfurt, Institute of Physics, Germany

**Innovative Learning Environments and their impact on learning and instruction**  
Marian Mahat, The University of Melbourne, Australia; Wesley Imms, The University of Melbourne, Australia; Clare Newton, The University of Melbourne, Australia; Terry Byers, The University of Melbourne, Australia

**The Interaction of Learners’ Emotional State and Learning with Self-Generated Drawings**  
Sabrina Navratil, University of Mannheim, Germany; Tim Kühl, University of Mannheim, Germany

**Fostering Diagnostic Competences: A Meta-analysis on two Instructional Approaches**  
Venance Timothy, Ludwig-Maximilians-Universität (LMU), Germany; Frank Fischer, Ludwig-Maximilians-Universität (LMU), Germany; Raimund Grönlund, Ludwig-Maximilians-Universität (LMU), Germany; Matthias Schwaighofer, Ludwig-Maximilians-Universität (LMU), Germany; Nicole Heitzmann, University Munich & Clinics of University Munich, Germany

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### SYMPOSIUM: LEARNING IN HIGHER EDUCATION: INSTRUCTION AND STUDENT-RELATED FACTORS

**Chair**  
Maja Flaig, University of Trier, Germany

**Discussant**  
David Gijbels, University of Antwerp, Belgium

**Achievement in higher education: A review of meta-analyses**  
Michael Schneider, University of Trier, Germany; Franzis Preckel, University of Trier, Germany

**Examining the Evidentiary Basis of Flipped Learning**  
Manu Kapur, ETH Zurich, Switzerland

**Critical thinking, approaches to learning and self-efficacy among beginning university students**  
Liisa Postareff, University of Helsinki, Finland; Heidi Hyrylainen, University of Helsinki, Finland; Auli Toom, University of Helsinki, Finland

**Protective Factors for Students’ Situation-Specific and Situation-General Stress in Higher Education**  
Maja Flaig, University of Trier, Germany; Michael Schneider, University of Trier, Germany
Session N: 7  Time: 15:45-17:15  Location: Pinni B - B3107

**SYMPOSIUM: ALTERNATIVE PATHWAYS INTO TEACHING & BEGINNING TEACHERS IDENTITY FORMATION**

**Chair**
Hermann J. Abs, University of Duisburg-Essen, Germany

**Discussant**
Axel Gehrmann, TU Dresden, Germany

**Teacher “on hold” - Professional identity constructions of Teach First candidates**
Katrine Nesje, University of Oslo, Norway; Esther Tamara Canrinus, University of Oslo, Norway; Jon Strype, University of Bergen/The Norwegian Police University College, Norway

**Second career student teachers' intentions, motivations, and perceptions regarding teaching**
Orna Muller, ORT Braude College of Engineering, Israel; Ruth Zuzovsky, Kibbutzim College of Education, Israel; Smadar Donitsa-Schmidt, Kibbutzim College of Education, Israel

**Engineers as second-career teachers: Pedagogical perceptions in relation to previous career**
Orna Muller, ORT Braude College of Engineering, Israel; Yael Furman Shaharabani, ORT Braude College, Israel; Miri Shacham, ORT Braude Academic College of Engineering, Israel

**Initial teachers’ motivations to become a teacher – Comparing traditional and alternative trainings**
Eva Anderson-Park, University of Duisburg-Essen, Germany; Stefanie Morgenroth, University of Duisburg-Essen, Germany; Beatriz Antonia Cardoso Matafona, University of Duisburg-Essen, Germany; Hermann J. Abs, University of Duisburg-Essen, Germany

Session N: 8  Time: 15:45-17:15  Location: Main Building D - D11

**SYMPOSIUM: SELF-ASSESSMENT: WHERE WE ARE, WHERE TO NEXT.**

**Chair**
Arto Mykkänen, University of Oulu, Finland

**Organiser**
Ernesto Panadero, Universidad Autónoma de Madrid, Spain

**Discussant**
Philip Winne, Simon Fraser University, Canada

**Self-assessment, self-regulated learning and self-efficacy: A meta-analysis**
Anders Jonsson, Kristianstad University, Sweden; Ernesto Panadero, Universidad Autónoma de Madrid, Spain

**A cyclical self-assessment process: An analysis of how university students engage in self-assessment**
Zi Yan, The Education University of Hong Kong, Hong Kong; Gavin Brown, University of Auckland, New Zealand

**Self-assessment in tertiary education: Developing ontological awareness**
Gavin Brown, University of Auckland, New Zealand; Roseanna Bourke, Massey University, New Zealand

**From student self-assessment to developing evaluative judgement: repositioning a limiting discourse**
David Boud, University of Technology Sydney/ Deakin University, Australia; Rola Ajawi, Deakin University, Australia; Joanna Tai, Deakin University, Australia; Philip Dawson, Deakin University, Australia
SYMP OSIUM: INVESTIGATING AND DESIGNING FOR SITUATED KNOWLEDGE IN A WORLD OF CHANGE

Chair
Niels Dohn, Aarhus University, Denmark

Discussant
Daniel Hickey, Indiana University, United States

Conceptualizing context, transfer, and transformation
Stig Bersen Hansen, University of Southern Denmark, Denmark; Nina Bonderup Dohn, University of Southern Denmark, Denmark; Søren Harnow Klausen, Department of the Study of Culture, Denmark

Designing for situated knowledge: methodological issues and more
Rob Martens, Open University of the Netherlands, Netherlands; Maarten de Laat, Open University, Netherlands; Steven Verjans, Open University of the Netherlands, Netherlands

Students’ transformational practices
Thomas Ryberg, Aalborg University, Denmark; Jacob Davidsen, Aalborg University, Denmark

Designing simulated social practices
Jens Jørgen Hansen, University of Southern Denmark, Denmark; Nina Bonderup Dohn, University of Southern Denmark, Denmark

SYMP OSIUM: RESEARCHING SUSTAINABILITY IN HIGHER EDUCATION – FOCUSING THE SOCIAL SCIENCE DISCIPLINES

Chair
Peter Davies, University of Birmingham, United Kingdom

Organiser
Cecilia Lundholm, Stockholm University, Sweden

Discussant
Gale Sinatra, University of Southern California, United States

Teaching sustainability in Economics and Business in China: Implications for transnational education
Jennie Winter, University of Plymouth, United Kingdom; Deborah Cotton, University of Plymouth, United Kingdom

A tale of two ‘educations’: Bringing Entrepreneurship and Sustainability Education into dialogue
Lynne Wyness, University of Plymouth, United Kingdom

Trust in government? Investigating trust and value orientations for environmental policy support
Cecilia Lundholm, Stockholm University, Sweden; Tomas Torbjörnsson, Stockholm University, Sweden; Niklas Harring, University of Gothenburg, Sweden

Knowing ‘social dilemmas’ – effects on willingness to sacrifice and accept environmental regulation
Niklas Harring, University of Gothenburg, Sweden; Cecilia Lundholm, Stockholm University, Sweden

ANNOTATIONS:
THE PRESENTATION BY LYNN WYNESS (A TALE OF TWO ‘EDUCATIONS’: BRINGING ENTREPRENEURSHIP AND SUSTAINABILITY EDUCATION INTO DIALOGUE) IS CANCELLED.
### Session N: 11  
**Time:** 15:45-17:15  
**Location:** Linna - K103

#### SYMPOSIUM: STUDENTS’ DIFFICULTIES WITH ALGEBRA: CAUSES AND SOLUTIONS

| Chair                      | Stumbling blocks in algebra: Difficulties with equivalence and negative number concepts  
|----------------------------|--------------------------------------------------------------------------------------  
| Jake McMullen, University of Turku, Finland | Kelly Trezise, The University of Melbourne, Australia; Robert Reeve, University of Melbourne, United Kingdom  
| Discussant                 | The Natural Number Bias Also Affects the Representational Form of Arithmetic Operation Results  
| Jon Star, Harvard University, United States | Konstantinos Christou, University of Western Macedonia, Greece  
|                           | Confronting confusion of similar algebraic concepts by teaching multiplication before addition  
|                           | Esther Ziegler, ETH Zurich, Switzerland; Peter Edelsbrunner, ETH Zurich, Switzerland; Jon Star, Harvard University, United States  
|                           | Individual Differences in Procedural and Conceptual Knowledge of Algebra  
|                           | Jake McMullen, University of Turku, Finland; Erno Lehtinen, University of Turku, Finland |

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### Session N: 12  
**Time:** 15:45-17:15  
**Location:** Pinni B - B3111

#### SYMPOSIUM: HOW DO LEARNERS UNDERSTAND SCIENTIFIC DISAGREEMENT AND WHAT DO THEY DO ABOUT IT?

| Chair                       | Children’s Developing Understanding of Interpretation as a Source of Disagreement  
|-----------------------------|------------------------------------------------------------------------------------  
| Eva Thomm, University of Erfurt, Germany | Michael Weinstock, Ben-Gurion University of the Negev, Israel; Vardit Israel, Ben-Gurion University of the Negev, Israel  
| Organisers                  | Adaptively Explaining Scientific Disagreements  
| Sarit Barzilai, University of Haifa, Israel; Clark Chinn, Rutgers University, United States | Sarit Barzilai, University of Haifa, Israel; Eva Thomm, University of Erfurt, Germany; Rainer Bromme, University of Münster, Germany  
| Discussant                  | Disagreement Discourse and Resolution Strategies in a Middle School Science Classroom  
| Barbara Hofer, Middlebury College, United States | Randi Zimmerman, Rutgers University Graduate School of Education, United States; Na’ama Av-Shalom, Rutgers University Graduate School of Education, United States; Clark Chinn, Rutgers University, United States; Ravit Golan Duncan, Rutgers University, United States  
|                           | The Effect of an Argumentative-Based Intervention on How Learners Deal with Disagreement  
|                           | Kalypso Iordanou, University of Central Lancashire, Cyprus; Deanna Kuhn, Columbia University, United States |

**Annotations:**  
**Important Notice:** This session is moved to main building - D13.
### SYMPOSIUM: EFFECTS OF EARLY CHILDHOOD EDUCATION WITH HIGH-RISK-FAMILIES: NEW DIRECTIONS FOR PUBLIC POLICY

**Chair**
Andrea Lanfranchi, University of Applied Sciences of Special Needs Education, Switzerland

**Discussant**
Andreas Eickhorst, German Youth Institute (DJJ), Germany

**Facilitating Linguistically Diverse Parents to Enhance Toddler’s Vocabulary Development**
Rosa Teepe, Radboud University Nijmegen, Netherlands; Inge Molenaar, Radboud University Nijmegen, Netherlands; Ludo Verhoeven, Radboud University Nijmegen, Netherlands; Ron Oostdam, University of Amsterdam, Netherlands

**The prevention dilemma in early interventions: How to recruit and randomise at-risk families?**
Alex Neuhauser, University of Applied Sciences of Special Needs Education, Switzerland; Erich Ramseier, PHBern – University of Teacher Education, Switzerland; Simone Schaub, University of Applied Sciences of Special Needs Education, Switzerland; Susan C.A. Burkhardt, University of Applied Sciences of Special Needs Education, Switzerland; Andrea Lanfranchi, University of Applied Sciences of Special Needs Education, Switzerland

**Effects of the German NFP adaption “ProKind” on mothers and children: Policy implications?**
Andrea Lanfranchi, University of Applied Sciences of Special Needs Education, Switzerland; Verena Daehne, University of Leipzig, Child and Adolescent Psychiatry, Psychotherapy, and Psychosomatics, Germany; Tanja Jungmann, University of Rostock, Germany; Tilman Brand, Leibniz Institute for Prevention Research and Epidemiology – BIPS, Bremen, Germany

**Generating evidence and informing policy: The Building Blocks trial of the FNP in England**
Michael Robling, Cardiff University, United Kingdom; Julia Sanders, Cardiff University, United Kingdom; Rebecca Cannings-John, School of Healthcare Sciences, Cardiff University, United Kingdom

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### SYMPOSIUM: PROFESSIONAL LEARNING COMMUNITIES IN PRIMARY EDUCATION: RESULTS FROM FOUR (MULTIPLE) CASE STUDIES

**Chair**
István Sincér, Erasmus University Rotterdam, Netherlands

**Organisers**
Eke Krijnen, Erasmus University Rotterdam, Netherlands; Marina Ilías, VU University Amsterdam, Netherlands

**Discussant**
Geert Devos, Ghent University, Belgium

**Collaborative teacher learning: Individual and shared perceptions**
Jannet Doppenberg, Eindhoven University of Technology, Netherlands

**Teamwork as a tool for collaboration and professional development**
Bírma María Svánbjörnsdóttir, University of Akureyri, Iceland

**Professional learning communities aiming to sustain the implementation of a family literacy program**
Eke Krijnen, Erasmus University Rotterdam, Netherlands; Roel Van Steensel, Erasmus University Rotterdam / VU University, Netherlands; Marieke Meeuwisse, Erasmus University Rotterdam, Netherlands; Sabine Severiens, Erasmus University Rotterdam, Netherlands

**Professional learning communities with teachers and parents: supporting educational partnerships**
Marina Ilías, VU University Amsterdam, Netherlands; Agnes Willlemen, VU University Amsterdam, Netherlands; Marjolein Dobber, VU University Amsterdam, Netherlands; Carlo Schuengel, VU University Amsterdam, Netherlands; Mirjam Oosterman, VU University Amsterdam, Netherlands; Trees Pels, VU University Amsterdam, Netherlands
### Session N: 15

**Time:** 15:45-17:15  
**Location:** Main Building A - A05

#### SYMPOSIUM: HOW TEACHERS ACT: THE DEVELOPMENT OF PROFESSIONAL CLASSROOM COMPETENCIES

**Chairs**  
Stefan Keller, School of Teacher Education Basel, Switzerland; Jens Möller, University of Kiel, Germany

**Discussant**  
Johannes König, University of Cologne, Germany

**How regular elementary school teachers can boost their student’s conceptual knowledge in physics**  
Ralph Schumacher, ETH Zurich, Switzerland; Peter Edelsbrunner, ETH Zurich, Switzerland; Lennart Schalk, ETH Zurich, Switzerland; Anne Deiglmayr, ETH Zurich, Switzerland; Elsbeth Stern, ETH Zurich, Switzerland

**Teacher learning in Lesson Study: learning patterns, dialogue & teacher professional identity**  
Jan Vermunt, University of Cambridge, United Kingdom; Maria Vriki, University of Cambridge, United Kingdom; Paul Warwick, University of Cambridge, United Kingdom; Neil Mercer, University of Cambridge, United Kingdom

**Accuracy of teachers’ judgments of students’ cognitive abilities: A meta-analysis**  
Nils Machts, University of Kiel, Germany; Jens Möller, University of Kiel, Germany; Johanna Kaiser, University of Kiel, Germany; Fabian T. C. Schmidt, Leibniz Institute for Science and Mathematics Education (IPN), Germany

**Influence of linguistic features in English essays on teachers’ assessments**  
Stefan Keller, School of Teacher Education Basel, Switzerland; Cristina Voegelin, University of Applied Sciences Northwestern Switzerland, Switzerland

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### Session N: 16

**Time:** 15:45-17:15  
**Location:** Main Building D - D14

#### SYMPOSIUM: THE IMPACT OF INDIVIDUAL AND CONTEXTUAL FACTORS ON THE FIRST YEAR IN HIGHER EDUCATION

**Chair**  
Elke Bosse, University of Hamburg, Germany

**Discussant**  
Edith Braun, University of Kassel, Germany

**The Importance of Academic Adjustment for a Successful Transition to University**  
Els van Rooij, University of Groningen, Netherlands

**Investigating the context-specificity of academic adjustment to higher education**  
Mikaël De Clercq, Université catholique de Louvain (UCL), Belgium

**The Interplay of Institutional Requirements and First-Year Students’ Academic Competence**  
Miriam Barnat, University of Hamburg, Germany; Elke Bosse, University of Hamburg, Germany

**The First Year in Higher Education: The Role of Individual Factors and the Learning Environment**  
Hildegard Schaeper, DZHW - German Centre for Research on Higher Education and Science Studies, Germany
### SYMPOSIUM: CONSTRUCTING SITUATIONAL AND MATHEMATICAL MODELS OF WORD PROBLEMS: ANALYSIS AND IMPROVEMENT

**Chair**  
Lieven Verschaffel, KU LEUVEN, Belgium

**Discussant**  
Bethany Rittle-Johnson, Vanderbilt University, United States

#### Using retelling data in the study of pupils’ representations of P-items
Wim Van Dooren, KU Leuven, Belgium; Febe Goemare, KU LEUVEN, Belgium; Lieven Verschaffel, KU Leuven, Belgium

#### Dutch third to sixth graders’ word-problem solving: student and problem factors
Marian Hickendorff, Leiden University, Netherlands

#### Measuring strategic knowledge about drawing for solving real-world problems
Stanislaw Schukajlow, University of Münster, Germany; Johanna Rellensmann, University of Münster, Germany; Claudia Leopold, University of Fribourg, Switzerland

#### The percentage bar as visual strategy to solve word problems
Timo Leuders, University of Education Freiburg, Germany; Benjamin Thiede, University of Freiburg, Germany; Lars Holzäpfel, University of Freiburg, Germany

### SYMPOSIUM: THE ROLE OF PLAY IN ADVANCING CHILD LEARNING AND DEVELOPMENT

**Chair**  
Esther Adi-Japha, Bar-Ilan University, Israel

**Discussant**  
David Whitebread, University of Cambridge, United Kingdom

#### Play as a prerequisite for scientific literacy
Eike Hildebrandt, University of Applied Sciences Northwestern Switzerland, Switzerland; Mark Weisshaupt, University of Applied Sciences Northwestern Switzerland, Switzerland

#### Promoting the linear ruler representation by 4-year old children through playing number board games
Bernhard Hauser, University of Teacher Education St.Gallen, Switzerland; Cornelia Rüdisüli, Institute of research in teaching and learning, University of Education St. Gallen, Switzerland; Carolin Burmeister, Institute of research in teaching and learning, University of Education St. Gallen, Switzerland; Sara Siomos, Institute of research in teaching and learning, University of Education St. Gallen, Switzerland

#### Explorative play as affordances-guided learning about the physical, social and symbolic world
Paul Leseman, Utrecht University, Netherlands; Ora Oudgenoeg-Paz, Utrecht University, Netherlands; Ine van Liempd, Utrecht University, Netherlands

#### Drawing facial expressions and understanding mixed-emotions
Esther Adi-Japha, Bar-Ilan University, Israel; Naomi Nadler, Bar-Ilan University, Israel; Norman Freeman, Bristol university, United Kingdom
### SYMPOSIUM: DIVERSE METHODOLOGIES FOR INVESTIGATING AND SUPPORTING THE DEVELOPMENT OF HISTORICAL REASONING

<table>
<thead>
<tr>
<th>Chairs</th>
<th>Historians’ epistemic aims: interviewing experts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marjaana Puurtinen, University of Turku, Finland; Clark Chinn, Rutgers University, United States</td>
<td>Mikko Kainulainen, University of Turku, Finland; Marjaana Puurtinen, University of Turku, Finland; Clark Chinn, Rutgers University, United States</td>
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<thead>
<tr>
<th>Discussion</th>
<th>Reading, reasoning, and writing like a historian: what concurrent think-alouds reveal</th>
</tr>
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<tbody>
<tr>
<td>Jouni-Matti Kuukkanen, University of Oulu, Finland</td>
<td>Michael Bolz, University of Illinois at Chicago, United States; Susan Goldman, University of Illinois at Chicago, United States</td>
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<tr>
<th>Discussion</th>
<th>Formative assessment of historical causal reasoning: development of a theory-driven cognition model</th>
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<td>Uddhava Rozendal, University of Amsterdam, Netherlands; Carla Van Boxtel, University of Amsterdam, Netherlands</td>
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<tr>
<th>Discussion</th>
<th>Understanding teacher growth in facilitating whole-class text-based discussions in history</th>
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<td>Abby Reisman, University of Pennsylvania, United States</td>
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### SYMPOSIUM: INNOVATIVE APPLICATIONS OF TECHNOLOGY-BASED ASSESSMENT

<table>
<thead>
<tr>
<th>Chair</th>
<th>Developing Online Diagnostic Instruments for Assessing Pupils’ Skills at the Beginning of Schooling</th>
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<tbody>
<tr>
<td>Mari-Pauliina Vainikainen, University of Helsinki, Finland</td>
<td>Benő Csapó, University of Szeged, Hungary; Ágnes Hódi, MTA-SZTE, Hungary; Renáta Kiss, MTA-SZTE Research Group on the Development of Competencies, Hungary; Attila Pásztor, MTA-SZTE Research Group on the Development of Competencies, Hungary; Attila Rausch, ELTE Loránd University, Budapest, Hungary; Gyongyver Molnar, University of Szeged, Hungary</td>
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<tr>
<th>Discussion</th>
<th>Online Assessment of Inductive Reasoning and Its Predictive Power on Inquiry Skills in Science</th>
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<td>Attila Pásztor, MTA-SZTE Research Group on the Development of Competencies, Hungary; Gyongyver Molnar, University of Szeged, Hungary; Erzsebet Korom, University of Szeged, Hungary; Maria B. Nemeth, MTA-SZTE Research Group on the Development of Competencies, Hungary; Benő Csapó, University of Szeged, Hungary</td>
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<tr>
<th>Discussion</th>
<th>Automatically Analyzing PISA Text Responses: Reading Gender Gap and Trends across the Mode Change</th>
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<tbody>
<tr>
<td></td>
<td>Fabian Zehner, German Institute for International Educational Research (DIPF), Germany; Frank Goldhammer, German Institute for International Educational Research (DIPF), Centre for International Student Assessment (ZIB), Germany</td>
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<tr>
<th>Discussion</th>
<th>Computer Adaptive Learning Preparedness Test (CAT-LPT) for Vocational Upper Secondary Education</th>
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<tr>
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<td>Jukka Marjanen, University of Helsinki, Finland; Mari-Pauliina Vainikainen, University of Helsinki, Finland; Mikko Askainen, University of Helsinki, Finland; Sirkku Kupiainen, University of Helsinki, Finland; Risto Hotulainen, University of Helsinki, Finland</td>
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</tbody>
</table>
**Session N: 21**  
**Time: 15:45-17:15**  
**Location: Linna - Väinö Linna (K104)**

**SYMPOSIUM: CONNECTING THEORY AND PRACTICE: ENACTING PRACTICE IN TEACHER EDUCATION**

**Chair**  
Hilda Borko, Stanford University, United States

**Discussant**  
Kirsti Klette, University of Oslo, Norway

**Exploring the ‘problem of enactment’ in teacher education coursework**  
Inga Staal Jerset, University of Oslo, Norway; Kirsti Klette, University of Oslo, Norway; Karen Hammerness, American Museum of Natural History, United States

**A student perspective: Opportunities to enact practice in campus courses**  
Esther Canrinius, University of Agder, Norway; Kirsti Klette, University of Oslo, Norway; Ole Kristian Bergem, University of Oslo, Norway; Karen Hammerness, American Museum of Natural History, United States

**Student teachers’ perceptions on connecting theory and practice during university studies**  
Liina Malva, University of Tartu, Estonia; Åli Leijen, University of Tartu, Estonia

**Are we doing well? Monitoring teacher students’ perceptions of opportunities to learn core practices**  
Magdalena Muller, Pontificia Universidad Católica de Chile, Chile; Pilar Alamos, University of Virginia, United States

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**Session N: 22**  
**Time: 15:45-17:15**  
**Location: Virta - 113**

**SYMPOSIUM: RESEARCHING THE EXPERIENCES, IDENTITIES AND CAREER VISIONS OF INTERNATIONAL DOCTORAL STUDENTS**

**Chair**  
Sofie Kobayashi, University of Copenhagen, Denmark

**Discussant**  
Margaret Kiley, Australian National University, Australia

**Do PhD supervisors play a role in bridging academic cultures?**  
Dely Elliot, University of Glasgow, United Kingdom; Sofie Kobayashi, University of Copenhagen, Denmark

**The PhD experience of international students in Denmark: the story through photos**  
Sofie Kobayashi, University of Copenhagen, Denmark

**Becoming a researcher: international doctoral students’ learning experience in Australia**  
Lily T. H. Nguyen, The University of Melbourne, Australia; David Beckett, The University of Melbourne, Australia

**International doctoral students’ perceptions of factors contributing to their career visions**  
Yusuke Sâkurai, University of Tokyo, Japan; Viivi Virtanen, University of Helsinki, Finland; Jenna Vekkala, University of Helsinki, Finland; Kirsi Pyhältö, University of Oulu / University of Helsinki, Finland
### SYMPOSIUM: INSIGHTS IN THE WRITING PROCESS: FROM TRANSCRIPTION TO WRITING FLUENCY TO TEXT QUALITY.

**Chair**
Markus Linnemann, University of Koblenz-Landau, Germany

**Organisers**
Valerie Lemke, Mercator Institute for Literacy and Language Education, Germany; Markus Linnemann, University of Koblenz-Landau, Germany

**Discussant**
Markus Linnemann, University of Koblenz-Landau, Germany

**Writing Fluency: Definition, Assessment and Relationships**
Sabine Stephany, University of Cologne, Germany; Pia Claes, University of Cologne, Germany; Valerie Lemke, Mercator Institute for Literacy and Language Education, Germany

**Modelling the relationship between transcription and writing:**
The mediating role of bursts and pauses
Rui Alexandre Alves, University of Porto, Portugal; Teresa Limpo, University of Porto, Portugal

**Exploring the differences between production- and revision-bursts of written language**
Thierry Olive, CNRS & Université de Poitiers, France; Georgeta Cislaru, Université Sorbonne nouvelle, France; Sirine Bouriga, Université de Poitiers, France

**Revising at the leading edge: shaping ideas or clearing up noise?**
Eva Lindgren, Umeå University, Sweden; Asbjorg Westum, Umeå University, Sweden; Hanna Outakoski, Umeå University, Sweden; Kirk Sullivan, Umeå University, Sweden

### INVITED SYMPOSIUM: DEVELOPMENT AND LEARNING IN ELDERLY PEOPLE: A SOCIOCULTURAL APPROACH

**Chair**
Aleksander Bauca, University of Belgrade, Serbia

**Organiser**
Michèle Grossen, University of Lausanne, Switzerland

**Discussant**
Asa Makitalo, University of Gothenburg, Sweden

**Toward sociocultural approach to learning in elderly people: Extending Vygotsky’s theory**
Aleksander Bauca, University of Belgrade, Serbia

**Development, ageing and the hybrid mind: Growth and decline and ecologies of human functioning**
Roger Säljö, University of Gothenburg, Sweden

**Creativity and continuity of the self in the transition into the nursing home**
Michèle Grossen, University of Lausanne, Switzerland; Tania Zittoun, University of Neuchâtel, Switzerland

**Personal wisdom as a mirror of lifespan development: Affordances of a mixed-method approach**
Jelena Radisic, University of Oslo, Norway; Aleksander Bauca, University of Belgrade, Serbia
### INVITED SYMPOSIUM: THE “FRONTLINE” MISSION OF THE FRONTLINE LEARNING RESEARCH JOURNAL

**Chair**
Filip Dochy, KU LEUVEN, Belgium

**Discussant**
Erno Lehtinen, University of Turku, Finland

### SINGLE PAPER: TEACHING AND PRE-SERVICE TEACHER EDUCATION - B

**Chair**
Minna Törmänen, University of Helsinki, Finland

**Personality, opportunities to learn and teaching skills in field experiences of student teachers**
Antje Biermann, Saarland University, Germany; Isabelle Grassmé, University of Erlangen-Nuremberg, Germany; Michaela Glaeser-Zikuda, University of Erlangen-Nuremberg, Germany; Roland Bruenken, Saarland University, Germany

**Conceptions of connecting learning across education and workplace settings**
Viviana Sappa, Swiss Federal Institute for Vocational Education and Training, Switzerland; Sarojni Choy, Griffith University, Australia; Carmela Aprea, Friedrich Schiller University Jena, Germany

**Espoused and Enacted Beliefs about Intelligence and Teaching Among Preservice Teachers**
Leila Eve Ferguson, University of Oslo / Kristiania University College, Norway; Ivar Bråten, University of Oslo, Norway

**Training Success in an Online Training Course for Teachers**
Klaus Stiller, University of Regensburg, Germany; Regine Bachmaier, University of Regensburg, Germany
### Session O: 2  
**Time:** 17:30-19:00  
**Location:** Pinni - B1097

#### SINGLE PAPER: LEARNING AND DEVELOPMENT IN EARLY CHILDHOOD

**Chair**  
Eileen Lübecke, Germany

**Capturing children’s evaluation of educational technologies with “BiCo”**  
Lars Johanna Schmitt, Saarland University, Germany; Jochen Rick, Saarland University, United States; Armin Weinberger, Saarland University, Germany

**What underlies peer rejection? Conditional process analyses in early childhood education**  
Femke van der Wilt, VU Amsterdam, Netherlands; Claudia van Kruistum, Vrije Universiteit Amsterdam, Netherlands; Chiel van der Veen, Vrije Universiteit Amsterdam, Netherlands; Bert van Oers, Vrije Universiteit Amsterdam, Netherlands

**Structural and process quality in home based and centre based infant child care**  
Hester Hulippia, Ghent University, Belgium; Michel Vandenbroeck, Ghent University, Belgium; Jeroen Janssen, Ghent University, Belgium

**Progressive feedback in Finnish Early Childhood Education and Care (ECEC)**  
Jyrki Reunamo, University of Helsinki, Finland; Li-Chen Wang, Chang Gung University of Science and Technology, Taiwan; Hui-Chun Lee, Tzu Chi University, Taiwan; Shu-Chuan Shih, National Taitung University, Taiwan; Hui-Hua Chen, Dong Hwa University, Taiwan

*ANNOTATIONS:*  
THIS SESSION WILL BE CHAIRE BY NOORTJE JANSSEN, REPLACING EILEEN LÜBECKE.

### Session O: 3  
**Time:** 17:30-19:00  
**Location:** Virta - 109

#### SINGLE PAPER: MOTIVATION AND EMOTION - M

**Chair**  
Minna Torppa, University of Jyväskylä, Finland

**The Role of Emotional Reactivity in the Comprehension of Online Multiple Texts**  
Sara Scrimin, University of Padova, Italy; Lucia Mason, University of Padova, Italy; Sonia Zaccoletti, University of Padova, Italy

**Examining the Self-Generation of Subjective Task Value: A Mixed-Methods Investigation**  
Stuart Karabenick, University of Michigan, United States; Jeffrey Albrecht, University of Michigan, United States; Nicole Rausch; University of Michigan, United States

**Reference Group Effects on Task Interest in an Academic Learning Task - An Experimental Study**  
Jannis Bosch, Universität Potsdam, Germany; Jürgen Wilbert, Universität Potsdam, Germany

**Antecedents and consequences of student responsiveness to a relevance intervention in the classroom**  
Brigitte Brisson, German Institute for International Educational Research (DIPF), Germany; Chris S. Hulme, University of Virginia, United States; Isabelle Haefner, University of Tübingen, Germany; Hanna Gaspard, University of Tübingen, Germany; Barbara Flunger, Utrecht University, Netherlands; Anna-Lena Dicke, University of California, Irvine, United States; Ulrich Trautwein, University of Tübingen, Germany; Benjamin Nagengast, Eberhard Karls Universität Tübingen, Germany

*FRIDAY, 1 SEPTEMBER 2017*
### Session O: 4
**Time:** 17:30-19:00  
**Location:** Linna - Väinö Linna (K104)

#### SINGLE PAPER: MOTIVATION AND SELF-REGULATION

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<tr>
<td>Kathy Sylva, University of Oxford, United Kingdom</td>
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| Parents and adolescent students’ views on the stimulation of self-regulation in the home environment |
| Valérie Thomas, Vrije Universiteit Brussel, Belgium; Koen Lombaerts, Vrije Universiteit Brussel, Belgium; Jeltsen Peeters, Vrije Universiteit Brussel (VUB), Belgium |

| Interplay of temporal changes in self-regulation, academic success and perceived group challenges |
| Muhterem Dindar, University of Oulu, Finland; Jonna Malmberg, University of Oulu, Finland; Sanna Järvelä, University of Oulu, Finland; Paul A. Kirschner, Open University of the Netherlands, Netherlands |

| An analysis of students’ written accounts in first and third person empathy tasks. |
| Carla Van Boxtel, University of Amsterdam, Netherlands; Tessa de Leur, University of Amsterdam, Netherlands; Arie Witschut, Amsterdam University of Applied Sciences (AUAS), Netherlands |

| Classroom Organization: Mitigating the effects of children’ self-regulation on math achievement |
| David Munez, National Institute of Education / Nanyang Technological University, Singapore; Kerry Lee, Nanyang Technological University/National Institute of Education, Singapore; Rebecca Bull, National Institute of Education/Nanyang Technological University, Singapore, Singapore |

### Session O: 5
**Time:** 17:30-19:00  
**Location:** Pinni B - B1096

#### SINGLE PAPER: TEACHER PROFESSIONAL DEVELOPMENT - B

<table>
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<tr>
<td>François Lombard, University of Geneva, Switzerland</td>
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</table>

| Beginning teachers’ profiles of professional competence: Who are the more successful teachers? |
| Christina Linninger, Goethe-Universität Frankfurt, Germany; Doris Holzberger, Technical University of Munich (TUM), Germany; Mareike Kunter, Goethe-Universität Frankfurt, Germany |

| A review on ICT-training in Scandinavian teacher education |
| Fredrik Mark Røkenes, Norwegian University of Science and Technology, Norway; Rune Krumsvik, University of Bergen, Norway |

| Stories of student teachers about their practice: a learning tool for students and teacher educators |
| Ietje Pauw, Katholieke Pabo Zwolle, Netherlands; Wenckje Jongstra, Katholieke Pabo Zwolle, Netherlands |

| The role of experience-based and research-based knowledge for teachers’ instructional decision-making |
| Ulrike Franke, Ludwig-Maximilians-Universität (LMU), Germany; Christof Wecker, Ludwig-Maximilians-Universität (LMU), Germany |

**Annotations:**

- The presentation by Ietje Pauw (Stories of Student Teachers About Their Practice: A Learning Tool for Students and Teacher Educators) is moved to Session J: 29 and is replaced by Ingo Kollar (A Script Approach to the Conceptualisation of Pre-Service Teachers’ Evidence-Based Reasoning).

- The presentation by Fredrik Mark Røkenes (A Review on ICT-Training in Scandinavian Teacher Education) is moved to Session D: 19.
## SINGLE PAPER: METACOGNITION AND SELF-REGULATION - B

**Chair**  
Antti Rajala, University of Helsinki, Finland

**Associations between metacognition and executive functions in 2-5 year olds during problem-solving**  
Loren Marulis, Connecticut College, United States; Lindsey Nelson, Connecticut College, United States

**Modeling relations between epistemic cognition, interest, and science knowledge across gender**  
Christian Brandmo, University of Oslo, Norway; Ivar Bråten, University of Oslo, Norway; Helge Strømø, University of Oslo, Norway

**The use and effects of motivational and metacognitive strategy hints**  
Danny Koonts, University of Groningen, Netherlands

**Does mind wandering and metacognition predict verbal and figural creativity in high school students?**  
David Preiss, Pontificia Universidad Catolica de Chile, Chile; Dominga Ortiz, Pontificia Universidad Catolica de Chile, Chile

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## SINGLE PAPER: INSTRUCTIONAL DESIGN - C

**Chair**  
Bobby Hoffman, University of Central Florida, United States

**Learning from Diagrams: Effects of Strategy Training**  
Marco Kragten, Amsterdam University of Applied Sciences, Netherlands; Wilfried Admiraal, Leiden University, Netherlands; Gert Rijlaardsdam, University of Amsterdam, Netherlands

**How to improve managers’ social interaction strategies during blended leadership training?**  
Kirsti Lonka, University of Helsinki, Finland; Markus Talvio, University of Helsinki, Finland; Kiti Marttinen, HAAGA-HELIA University of Applied Sciences, Finland; Elina E. Ketonen, University of Helsinki, Finland

**Deep structure similarity explains effectiveness of Guided Cognition homework across content domains**  
William B. Whitten II, Fordham University, United States; Mitchell Rabinowitz, Fordham University, United States; Sandra E. Whitten, Fordham University, United States

**The use of manipulatives in mathematics classrooms from the pedagogical and practical perspective**  
Daranee Lehtonen, University of Tampere, Finland; Jorma Joutsenlahti, University of Tampere, Finland

**Annotations:**  
Bobby Hoffman will chair session B:19 and is replaced by Anja Linberg.
### Session O: 8
**Time:** 17:30-19:00  
**Location:** Main Building A - A32

#### SINGLE PAPER: TEACHING AND TEACHING EDUCATION

**Chair**  
Jeannine Turner, Florida State University, United States

<table>
<thead>
<tr>
<th>Title</th>
<th>Presenter</th>
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<tbody>
<tr>
<td>Stories of resilience. Exploring resilience among part-time trainee teachers in the Netherlands</td>
<td>Barbara Roosken, Fontys University of Applied Sciences, Netherlands</td>
</tr>
<tr>
<td>Language awareness from a teachers’ perspective: Tensions between difficulties and possibilities</td>
<td>Ellen van den Broek, Radboud University Nijmegen, Netherlands; Paulien Meijer, Radboud University, Graduate School of Education, Netherlands; Ans van Kemenade, Radboud University, Netherlands</td>
</tr>
<tr>
<td>Teaching computational thinking in preservice teacher education with scaffolded programming scripts</td>
<td>Charoula Angeli-Valanides, University of Cyprus, Cyprus; Kamini Jaipal-Jamani, Brock University, Canada</td>
</tr>
<tr>
<td>Exploring general pedagogical knowledge in teacher education - a learning oriented approach</td>
<td>Christian Kraler, Teacher Education and School Research, Austria; Fiona MacKay-Falls, University of Innsbruck, Austria</td>
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### Session O: 9
**Time:** 17:30-19:00  
**Location:** Virta - 120

#### SINGLE PAPER: COOPERATIVE LEARNING AND SOCIAL INTERACTION

**Chair**  
Susan Goldman, University of Illinois at Chicago, United States

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<thead>
<tr>
<th>Title</th>
<th>Presenter</th>
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<tbody>
<tr>
<td>Academic help seeking: The case of French lower secondary students</td>
<td>Minna Puustinen, INS HEA, France; Christine Berzin, University of Picardie Jules Verne, France</td>
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<tr>
<td>Transformative agency as warping: Expanding on Vygotsky’s principle of double stimulation</td>
<td>Annalisa Sannino, University of Helsinki, Italy</td>
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<td>Controversy mapping: Navigating and mediating issues of concern</td>
<td>Anne Solli, University of Gothenburg, Sweden; Asa Makitalo, University of Gothenburg, Sweden; Mark Elam, University of Gothenburg, Sweden</td>
</tr>
<tr>
<td>Temporal and spatial artifacts for formative agency and expansive learning in a food cooperative</td>
<td>Yrjö Engeström, University of Helsinki, Finland; Juhana Rantavuori, Center for Research on Activity, Development and Learning CRADLE, Finland</td>
</tr>
</tbody>
</table>
### Session O: 10
**Time:** 17:30-19:00  **Location:** Main Building D - D10B

#### SINGLE PAPER: TEACHING AND TEACHER EDUCATION - N

| Chair | Knowledge work assignments in upper secondary school: results of 13 cases  
|-------|---------------------------------------------------------------------  
|       | Liisa Ilomäki, University of Helsinki, Finland; Minna Lakkala, University of Helsinki, Finland; Auli Toom, University of Helsinki, Finland  
|       | Exploring changes in student teachers’ meaning-oriented learning during teacher education  
|       | Stella van der Wal-Maris, Eindhoven University of Technology / Marnix Academy for Teacher Education, Netherlands; Gonny Schellings, Eindhoven University of Technology, Netherlands; Douwe Beijaard, Eindhoven University of Technology, Netherlands; Jeannette Geldens, University for Professional Teacher Education ‘De Kempele’, Netherlands  
|       | Do good students become good teachers?  
|       | Kristin Wolf, Goethe-Universität Frankfurt, Germany  
|       | Strategies for Engaging Students in Rich Epistemic Discourse  
|       | Hillary Swanson, Northwestern University, United States; Allan Collins, Northwestern University, United States |
### SINGLE PAPER: MOTIVATION AND EDUCATIONAL PSYCHOLOGY - B

**Chair**
Michael Goller, University of Paderborn, Germany

**Physiological Indicators of Affective Processes during Multimedia Learning with a Virtual Human**
Nicholas Murdock, North Carolina State University, United States; Roger Azevedo, North Carolina State University, United States; Michelle Taub, North Carolina State University, United States; Garrett Millar, North Carolina State University, United States; Megan Price, North Carolina State University, United States; Amanda Bradbury, North Carolina State University, United States; Joseph Grafsgaard, North Carolina State University, United States

**Structure of emotions revisited: A co-occurrence network analysis of positive and negative emotions**
Julia Moeller, Yale University, United States; Zorana Ivcevic, Yale University, United States; Marc Brackett, Yale University, United States; Arielle White, Yale University, United States

**What do teachers think about their students’ inclusion? Consistency of self- and teacher reports**
Martin Venetz, University of Applied Sciences of Special Needs Education, Switzerland; Carmen Zurbriggen, University of Fribourg, Switzerland; Susanne Schwab, University of Wuppertal, Germany

**Young adults’ career goal effort and stress trajectories in academic and non-academic tracks**
Mette Ranta, University of Jyväskylä, Finland; Elina Martinen, University of Jyväskylä, Finland; Julia Dietrich, Friedrich Schiller University of Jena, Germany; Katriina Salminen-Aro, Helsinki Collegium for Advanced Studies, Finland

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### SINGLE PAPER: LEARNING AND PROFESSIONAL DEVELOPMENT - E

**Chair**
Tina Anspal, University of Tartu, Estonia

**Instructional Sensitivity: Impacts and perspectives for vocational assessments (and education)**
Viola Klots, University of Mannheim, Germany; Esther Winther, German Institute for Adult Education Leibniz Centre for Lifelong Learning (DfE), Germany; Julia Sangmeister, German Institute for Adult Education Leibniz Centre for Lifelong Learning (DfE), Germany

**Professional vision and scaffolding in promoting SFON**
Maikki Jaatinen, University of Turku, Finland; Aino Mattinen, University of Turku, Finland; Minna M Hannula-Sormunen, University of Turku, Finland

**Becoming a nurse: student and teacher perceptions of professionalization**
Marilou Bélisle, Université de Sherbrooke, Canada; Johanne Goudreau, University of Montreal, Canada; Louise Boyer, University of Montreal, Canada; Paola Bastides, University of Sherbrooke, Canada

**A system-wide implementation to promote STEM learning using robotics**
Erhan Sinay, Toronto District School Board, Canada; Roula Anastasakos, Toronto District School Board, Canada; Antonio Santos, Toronto District School Board, Canada

**Annotations:**
The presentation by Maikki Jaatinen [Professional Vision and Scaffolding in Promoting SFON] is cancelled and replaced by Chiel van der Veen [The Effect of Mind Mapping on Listening Comprehension and Vocabulary in Early Childhood Education].
Session O: 14  |  Time: 17:30-19:00  |  Location: Pinni B - B0039

**SYMPOSIUM: ADAPTIVE EXPERTISE IN ELEMENTARY ARITHMETIC**

**Chair**  
Sanne Rathé, KU LEUVEN, Belgium

**Discussant**  
Marian Hickendorff, Leiden University, Netherlands

**Flexibility in Mental Arithmetic and Reasoning Patterns**  
Elisabeth Rathgeb-Schnierer, University of Kassel, Germany; Michael Green, University of North Carolina Charlotte, United States

**Efficient and flexible use of subtraction by addition in multi-digit subtraction**  
Joke Torbeys, KU Leuven, Belgium; Bert De Smedt, KU Leuven - University of Leuven, Belgium; Pol Ghesquiere, KU LEUVEN, Belgium; Lieven Verschaffel, KU LEUVEN, Belgium

**Two different subtraction algorithms: conceptual understanding and error rates**  
Hedwig Gasteiger, Osnabrück University, Germany

**The Development of Number Line Estimation Strategies**  
Koen Luwel, KU Leuven, Belgium; Dominique Peeters, KU LEUVEN, Belgium; Lieven Verschaffel, KU LEUVEN, Belgium

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Session O: 15  |  Time: 17:30-19:00  |  Location: Main Building A - A4

**SYMPOSIUM: PROFESSIONAL TEACHER AGENCY**

**Chair**  
Douwe Beijaard, Eindhoven University of Technology, Netherlands

**Discussant**  
Anneli Eteläpelto, University of Jyväskylä, Finland

**Exploring relational teacher agency for social justice**  
Natasa Pantic, University of Edinburgh, United Kingdom

**Perceptions of Teachers as Change agents in Primary Education**  
Monique van der Heijden, De Kempel University Teacher Education College / Eindhoven University of Technology, Netherlands; Douwe Beijaard, Eindhoven University of Technology, Netherlands; Jeannette Geldens, University for Professional Teacher Education 'De Kempel', Netherlands; Herman Popeijus, University for Professional Teacher Education 'De Kempel', Netherlands

**Professional agency in the university context: Academic freedom of chains?**  
Kaja Vähäsantanen, University of Jyväskylä, Finland; Susanna Paloniemi, University of Jyväskylä, Finland; Eija Räikkönen, University of Jyväskylä, Finland; Päivi Hökkä, University of Jyväskylä, Finland

**Trajectories of Subject Teacher Students’ Professional Agency in the Classroom**  
Kirs Pühö, University of Oulu / University of Helsinki, Finland; Auli Toom, University of Helsinki, Finland; Janne Pietarinen, University of Eastern Finland, Finland; Kaisa Haverinen, University of Eastern Finland, Finland; Tiina Soini, University of Tampere, Finland
### SYMPOSIUM: DEALING WITH HEALTH INFORMATION: EVALUATION OF SCIENTIFIC EVIDENCE AND EXPERT SOURCES

**Chairs**
Friederike Hendriks, University of Münster, Germany; Ronald Rinehart, University of Northern Iowa, United States

**Organisers**
Friederike Hendriks, University of Münster, Germany; Ronald Rinehart, University of Northern Iowa, United States

**Discussant**
Gavin Brown, University of Auckland, New Zealand

- **The Polio Vaccination Debate on Facebook: Debating Health Information to Engage with Science**
  Avi J. Sharon, Technion - Israel Institute of Technology, Israel; Daniela Orr, The Technion Israel Institute of Technology, Israel; Ayelet Baram-Tsabari, Technion, Israel

- **Trust Them Here? Trust Them There? Impact of Forum Type on Evaluation of Information Credibility**
  Maria Zimmermann, University of Münster, Germany; Regina Jucks, WWU Münster, Germany

- **How Scientific Literacy Benefits Laypeople’s Persuasiveness Judgments About Scientific Evidence**
  Friederike Hendriks, University of Münster, Germany; Dorothe Kienhues, University of Münster, Germany; Rainer Bromme, University of Münster, Germany

- **The Body of Evidence: The Role of Evidence Evaluation in Science Classes**
  Ronald Rinehart, University of Northern Iowa, United States; Clark Chinn, Rutgers University, United States; Ravit Golan Duncan, Rutgers University, United States

### SYMPOSIUM: THE ROLE OF FEEDBACK AND STANDARDS IN THE SELF-REGULATION OF STUDENTS’ CONFIDENCE AND PERFORMANCE

**Chair**
Daniel Dinsmore, University of North Florida, United States

**Discussant**
Stephanie Pleschl, University of Newcastle, Australia

- **Have Measures of Relative Accuracy been Relative Enough? A Quantitative Analysis**
  Daniel Dinsmore, University of North Florida, United States; Meghan Parkinson, Jacksonville Public Library, United States

- **Standards in calibration: Students’ perceptions of conditions for creating performance standards**
  Allyson Hadwin, University of Victoria, Canada; Lindsay McCordie, University of Ottawa, Canada

- **Beyond Hypercorrection: Remembering Corrective Feedback for Low-Confidence Responses**
  Lauren Griffiths, University of Southampton, United Kingdom; Philip Highham, University of Southampton, United Kingdom

- **Feedback Supports Childrens’ Ability to Accurately Self-Regulate Concept Learning**
  Mariette van Loon, University of Bern, Switzerland; Claudia Roekers, University of Bern, Switzerland
**Session O: 18**  
**Time: 17:30-19:00**  
**Location: Main Building C - C7**

**SYMPOSIUM: IMPROVING TEACHER SELECTION METHODS: KEY CHALLENGES AND STEPS FORWARD**

**Chair**  
Anna-Maija Poikkeus, University of Jyväskylä, Finland

**Discussant**  
Friederike Zimmermann, University of Kiel, Germany

Selection Methods for Teachers and Prospective Teachers: A Meta-Analysis  
Robert Klassen, University of York, United Kingdom; Lisa Kim, University of York, United Kingdom

Developing Student Selection for Teacher Training: Piloting Situational Judgment Test in Finland  
Anna-Maija Poikkeus, University of Jyväskylä, Finland

To What Extent Can SJT Measure the NonCognitive Attributes of Prospective Teachers in Oman?  
Waleed Al Hashmi, University of York, United Kingdom

Piloting Multiple Mini Interview in Teacher Education Selections: Applicant Reactions and Feasibility  
Riitta-Leena Metsapelto, University of Jyväskylä, Finland

**Annotations:**  
IMPORTANT NOTICE: THIS SESSION WILL TAKE PLACE IN ROOM MAIN BUILDING A - A06.

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**Session O: 19**  
**Time: 17:30-19:00**  
**Location: Main Building A - A2A**

**SYMPOSIUM: INTEREST AND COMPETENCE CO-DEVELOPMENT: SPIRALING GROWTH THAT WE NEED TO HARNES**

**Chair**  
Quint Oga-Baldwin, Waseda University, Japan

**Organisers**  
Luke K. Fryer, The University of Hong Kong, Hong Kong; Maximilian Knogler, Technical University of Munich (TUM), Germany

**Discussant**  
Amanda Durik, Northern Illinois University, United States

Explaining situational interest during complex problem solving  
Maximilian Knogler, Technical University of Munich (TUM), Germany; Alexander Groeschner, Friedrich Schiller University Jena, Germany; Doris Lewalter, Technical University of Munich (TUM), Germany

The predictors and outcomes of the changes in students’ course-specific interest and self-efficacy  
Anna Tapola, University of Helsinki, Finland; Heta Tuominen, University of Helsinki, Finland; Markku Niemivirta, University of Oslo, Norway

**THE EFFECT OF SITUATIONAL INTEREST ON KNOWLEDGE ACQUISITION DURING SCHOOL MUSEUM VISITS**  
Doris Lewalter, Technical University of Munich (TUM), Germany; Katrin Neubauer, TUM School of Education, Germany

Spiraling developmental (reciprocal) links: Getting Interested and Competent?  
Luke K. Fryer, The University of Hong Kong, Hong Kong; Mary Ainley, University of Melbourne, Australia
# SYMPOSIUM: CURRENT ISSUES IN NAVIGATING SELF-REGULATED LEARNING ENVIRONMENTS

**Chair**
Jeroen Van Merrienboer, Maastricht University, Netherlands

**Discussants**
Tina Seufert, University of Ulm, Germany; Philip Winne, Simon Fraser University, Canada

## Epistemological Beliefs and Metacognition in Self-Regulated Learning Environments
Marco Fromm, University of Ulm, Germany; Tina Seufert, University of Ulm, Germany

## Training Self-Regulated Learning Skills with Video-based Modeling Examples
Steven Raaijmakers, Utrecht University, Netherlands; Martine Baars, Erasmus University Rotterdam, Netherlands; Lydia Schaap, Erasmus University Rotterdam, Netherlands; Fred Paas, Erasmus University Rotterdam/University of Wollongong, Netherlands; Jeroen Van Merrienboer, Maastricht University, Netherlands; Tamara Van Gog, Utrecht University / Erasmus University Rotterdam, Netherlands

## Effects of Task-selection Guidance on Task Selections and Development of Domain-Specific Skills
Halszka Maria Jarodzka, Open University of the Netherlands, Netherlands; Michelle Nugteren, Utrecht University, Netherlands; Liesbeth Kester, Utrecht University, Netherlands; Jeroen Van Merrienboer, Maastricht University, Netherlands

## Task Selection and Learning a Problem-Solving Procedure
Jeroen Van Merrienboer, Maastricht University, Netherlands; Jimmie Leppink, Maastricht University, Netherlands; Tamara Van Gog, Utrecht University / Erasmus University Rotterdam, Netherlands; Liesbeth Kester, Utrecht University, Netherlands; Fred Paas, Erasmus University Rotterdam/University of Wollongong, Netherlands

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# SYMPOSIUM: COGNITIVE DEVELOPMENT FROM LATE CHILDHOOD TO ADOLESCENCE: CHALLENGES FOR EDUCATION

**Chair**
Elisabeth Stern, ETH Zurich, Switzerland

**Discussant**
Mutsumi Imai, Keio University, Japan

## Who makes use of prior knowledge in a curriculum on proportional reasoning?
Daniela Nussbaumer, University of Applied Sciences of Special Needs Education, Switzerland; Ralph Schumacher, ETH Zurich, Switzerland; Elisabeth Stern, ETH Zurich, Switzerland

## Mapping and changing general intelligence: A theory and an intervention program
Andreas Demetriou, University of Nicosia, Cyprus

## Growth and changes in mathematical and formal thinking in Finland: A nine-year follow-up.
Jarkko Hautamaki, University of Helsinki, Finland; Mari-Pauliina Vainikainen, University of Helsinki, Finland; Satu Koivuhovi, University of Helsinki, Finland

## Assessment and training of experimentation skills in primary school children
Sonja Peteranderl, ETH Zurich, Switzerland; Anne Deiglmayr, ETH Zurich, Switzerland
**SYMPOSIUM: LANGUAGE TEACHERS’ PROFESSIONAL KNOWLEDGE: CONCEPTUALIZATION, ASSESSMENT, DEVELOPMENT**

<table>
<thead>
<tr>
<th>Chairs</th>
<th>Teachers’ professional competence for teaching English as a foreign language</th>
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<tbody>
<tr>
<td>Fien Depaepe, KU LEUVEN, Belgium; Johannes König, University of Cologne, Germany</td>
<td>Sarah Strauß, University of Cologne, Germany; Sandra Lammerding, University of Cologne, Germany; Günter Nold, Technical University of Dortmund, Germany; Andreas Rohde, University of Cologne, Germany; Sarantis Tachtsoğlu, University of Cologne, Greece</td>
</tr>
<tr>
<td>Organiser</td>
<td>Impact of opportunities to learn in teacher education on teacher professional knowledge in French</td>
</tr>
<tr>
<td>Johannes König, University of Cologne, Germany</td>
<td>Marie Evens, KU Leuven, Belgium; Jan Elen, KU LEUVEN, Belgium; Fien Depaepe, KU Leuven, Belgium</td>
</tr>
<tr>
<td>Discussant</td>
<td>Feedback in foreign language writing: Exploring teachers’ pedagogical content knowledge</td>
</tr>
<tr>
<td>Horst Biedermann, University of Teacher Education St.Gallen, Switzerland</td>
<td>Helma Oolbekkink-Marchand, Radboud University Nijmegen, Netherlands; Astrid Eelkema, Radboud University Nijmegen, Netherlands</td>
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<tr>
<td></td>
<td>German language teacher knowledge and its effects on instructional quality</td>
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<td></td>
<td>Sandra Lammerding, University of Cologne, Germany; Sarah Strauß, University of Cologne, Germany; Albert Bremerich-Vos, University of Duisburg-Essen, Germany; Christiane Buchholtz, Technical University Berlin, Germany; Johannes König, University of Cologne, Germany</td>
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**SYMPOSIUM: USING VIDEO-DATA TO CAPTURE MOTIVATIONAL, REGULATIVE AND COGNITIVE PROCESSES DURING COLLABORATION**

<table>
<thead>
<tr>
<th>Chair</th>
<th>Social Regulation at the Workplace: Understanding Social Regulation of Learning in ICT Teams</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maaike Endedijk, University of Twente, Netherlands</td>
<td>Marijn Wijga, University of Twente, Netherlands; Maaike Endedijk, University of Twente, Netherlands</td>
</tr>
<tr>
<td>Organiser</td>
<td>Exploring the fluctuation of motivation, emotion and cognitive regulation in collaborative groups</td>
</tr>
<tr>
<td>Maaike Endedijk, University of Twente, Netherlands</td>
<td>Hanna Jarvenoja, University of Oulu, Finland; Jonna Malmberg, University of Oulu, Finland; Sanna Järvelä, University of Oulu, Finland</td>
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<tr>
<td>Discussant</td>
<td>Negotiation of shared achievement goals during collaborative group interactions</td>
</tr>
<tr>
<td>Simone Volet, Murdoch University, Australia</td>
<td>Toni Rogat, Purdue University, United States; Karlyn Adams-Wiggins, University of Texas – Tyler, United States; Temitope Adeoye, Purdue University, United States; Zhiping Zhang, Purdue University, United States</td>
</tr>
<tr>
<td></td>
<td>How primary school students use ground rules for effective collaboration</td>
</tr>
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<td></td>
<td>Hannie Gijlers, University of Twente, Netherlands; Tracey Olde Rikker, Expertis Onderwijsadviseurs, Netherlands</td>
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</table>
## SYMPOSIUM: PROMOTING DEEP LEARNING THROUGH GENERATIVE LEARNING ACTIVITIES

<table>
<thead>
<tr>
<th>Chair</th>
<th>Why does generative drawing work so well? An eye tracking study to evaluate theoretical assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Susanne Narciss, TU Dresden, Germany</td>
<td>Johannes Hellenbrand, University of Duisburg-Essen, Germany; Maria Opfermann, Universität Utrecht / Hogeschool Utrecht, Netherlands; Annett Schmeck, Universität Duisburg Essen, Germany; Detlef Leutner, University of Duisburg-Essen, Germany</td>
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<tr>
<td>Organiser</td>
<td>Cognitive and Metacognitive Benefits of Generative Learning Strategies</td>
</tr>
<tr>
<td>Susanne Narciss, TU Dresden, Germany</td>
<td>Logan Fiorello, University of Georgia, United States</td>
</tr>
<tr>
<td>Discussant</td>
<td>How can CSCL-scripts transfer individual into transactive knowledge generation for deep learning?</td>
</tr>
<tr>
<td>Erica de Vries, Université Grenoble Alpes, France</td>
<td>Stephan Mende, TU Dresden, Germany; Antje Proske, Technische Universität Dresden, Germany; Susanne Narciss, TU Dresden, Germany</td>
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<td>Effects of an Emotion Regulation and Metacognitive Training on Knowledge Generation in Mathematics</td>
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<td>Tina Montreuil, McGill University, Canada</td>
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</table>

### ANNOTATIONS:

THIS SYMPOSIUM IS MOVED TO SESSION H: 28 IN ROOM: MAIN BUILDING C - C6

## INVITED SYMPOSIUM: MOTIVATION, AFFECT, AND BODY IN INSTRUCTIONAL DESIGN: CURRENT RESEARCH

<table>
<thead>
<tr>
<th>Chair</th>
<th>Assessment of Bodily Expression as an Indicator of Emotional Experience during Serious Gaming</th>
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<tbody>
<tr>
<td>Vincent Hoogerheide, Utrecht University, Netherlands</td>
<td>Valentin Riemer, University of Ulm, Germany; Julian Frommel, Ulm University, Germany; Claudia Schrader, University of Ulm, Germany</td>
</tr>
<tr>
<td>Organisers</td>
<td>The role of speech technology in affective modelling and adaptive feedback</td>
</tr>
<tr>
<td>Anne Deiglmayr, ETH Zurich, Switzerland; Steffi Zander, Bauhaus-Universität Weimar, Germany</td>
<td>Nikol Rummel, Ruhr University Bochum, Institute of Educational Research, Germany; Manolis Mavrikis, University College London, United Kingdom; Beate Grawemeyer, Birkbeck College, United Kingdom</td>
</tr>
<tr>
<td>Discussant</td>
<td>Does (Non-)Meaningful Sensori-motor Engagement Promote Learning with Animated Physical Systems?</td>
</tr>
<tr>
<td>Paul Ginnis, University of Sydney, Australia</td>
<td>Gertjan Rop, Erasmus University Rotterdam, Netherlands; Charly Eiels, Erasmus University Rotterdam, Netherlands; Wim Pouw, Erasmus University Rotterdam, Netherlands; Tamara Van Gog, Utrecht University, Netherlands; Rolf Zwan, Erasmus University Rotterdam, Netherlands; Fred Paas, Erasmus University Rotterdam/University of Wollongong, Netherlands</td>
</tr>
<tr>
<td></td>
<td>Strategies Used by Primary School Students During Physical Touch-Based Rotation</td>
</tr>
<tr>
<td></td>
<td>Sven Bertel, Flensburg University of Applied Sciences, Germany; Stefanie Wetzel, Bauhaus-Universität Weimar, Germany; Steffi Zander, Bauhaus-Universität Weimar, Germany</td>
</tr>
</tbody>
</table>
## INVITED SYMPOSIUM: THE UNIT OF ANALYSIS IN LEARNING RESEARCH: APPROACHES FOR IMAGINING A TRANSFORMATIVE RESEARCH AGENDA

**Chair**
Crina Damsa, University of Oslo, Norway

**Organisers**
Alfredo Jornet Gil, University of Oslo, Norway; Dominik E. Froehlich, University of Vienna, Austria; Andreas Gegenfurtner, Technische Hochschule Deggendorf, Germany

**Discussant**
Roger Säljö, University of Gothenburg, Sweden

Learning as construction of actionable concepts: A multimodal blending perspective
Lina Markauskaite, University of Sydney, Australia; Peter Goodyear, The University of Sydney, Australia

Integrating units of analysis: Applying mixed methods social network analysis
Judith Schoonenboom, University of Vienna, Austria; Dominik E. Froehlich, University of Vienna, Austria

Chronotope - researching contextual grounding of learning: Principles for the unit of analysis
Giuseppe Ritella, University of Helsinki, Finland; Antti Rajala, University of Helsinki, Finland

Lived experience as a unit of analysis: towards a second-person approach for learning research
Gilles Dieumegard, Université de Montpellier, France; Sandra Nogry, Université Montpellier, France; Magali Ollagnier-Beldame, Université Montpellier, France; Nicolas Perrin, Université Montpellier, France

## INVITED SYMPOSIUM: TOWARDS CITIZENSHIP WITH DELIBERATIVE ARGUMENTATION AND TECHNOLOGIES FOR NEW POLITICAL EDUCATION

**Chair**
Armin Weinberger, Saarland University, Germany

**Organiser**
Baruch Schwarz, Hebrew University of Jerusalem, Israel

**Discussant**
Armin Weinberger, Saarland University, Germany

Argumentation and Technology: Educational Tools or Civic Goals?
Aviv Cohen, The Hebrew University of Jerusalem, Israel

Computer-Supported deliberation about hot issues in a multi-cultural context
Baruch Schwarz, Hebrew University of Jerusalem, Israel; Benzi Slakmon, Ben Gurion University of the Negev, Israel

Agent Based Support for Collaborative Discourse
Carolyn Rose, Carnegie Mellon University, United States; Keith Maki, Carnegie Mellon University, United States; Michael Miller, Carnegie Mellon University, United States; Yohan Jo, Carnegie Mellon University, United States

How to Change Minds through Scaffolding Argumentation in Social Media
Armin Weinberger, Saarland University, Germany; Dimitra Tsoultzii, Saarland University, Germany; Thomas Puhl, Saarland University, Germany; Raluca Judele, Saarland University, Germany
**SINGLE PAPER: TEACHER EDUCATION AND TEACHING**

**Chair**  
Janna Teltemann, University of Hildesheim, Germany

**Student teachers’ proactive strategies and learning environment for reducing study-related burnout**  
Sanna Väisänen, University of Eastern Finland, Finland; Janne Pietarinen, University of Eastern Finland, Finland; Kirsi Pyhältö, University of Oulu / University of Helsinki, Finland; Auli Toom, University of Helsinki, Finland; Tiina Soini-Ikonen, University of Tampere, Finland

**Measuring teachers’ attitudes toward teaching integrated STEM: instrument development and validation**  
Lieve Thibaut, KU Leuven, Belgium; Heidi Knipprath, KU LEUVEN, Belgium; Wim Dehaene, KU LEUVEN, Belgium; Fien Depaepe, KU Leuven, Belgium

**Pre-Requisite Knowledge for Learning-Strategy Judgement is Fragmentary and Misconceptual**  
Inga Glogger-Frey, University of Freiburg, Germany; Marcus Deutscher, University of Freiburg, Germany; Alexander Renkl, University of Freiburg, Germany

**Program Development in Teacher Education: A systematic, configurative literature review**  
Hege Hermansen, University of Oslo, Norway

**ANNOTATIONS:**  
JANNA TELTEMANN WILL CHAIR SESSION J: 29 AND IS REPLACED BY IDALIS VILLANUEVA.

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**SINGLE PAPER: LEARNING WITH COMPUTERS**

**Chair**  
Eugenia Nanu, University of Turku, Finland

**Evidence from multiple field experiments in VET with different hypervideo-based learning scenarios**  
Alberto Cattaneo, Swiss Federal Institute for Vocational Education and Training, Switzerland; Florinda Sauli, Swiss Federal Institute for Vocational Education and Training (SFiVET), Switzerland

**A Theoretical Framework for Student-Created Digital Conceptual Artefacts in CSCL**  
Heisawon Jeong, Hallym University, Korea, Republic of; Kris Lund, University of Lyon, France

**„To be aware or not to be aware — that is the question.“ - Development of an Awareness Taxonomy**  
Anne Mock, University of Duisburg-Essen, Germany; Daniel Bodemer, University of Duisburg-Essen, Germany

**We need High Drop-out Rates in MOOCs: Evaluation and Personalization for Quality of Open Education**  
Christian M. Stracke, Open University of the Netherlands, Netherlands

**ANNOTATIONS:**  
THE PRESENTATION BY ANNE MOCK (“TO BE AWARE OR NOT TO BE AWARE – THAT IS THE QUESTION.” - DEVELOPMENT OF AN AWARENESS TAXONOMY) IS CANCELLED.
### Session P: 3  
**Time:** 08:45-10:15  
**Location:** Pinni B - B3111  

**SINGLE PAPER: INQUIRY LEARNING**

**Chair**  
Stuart Karabenick, University of Michigan, United States

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change of epistemological beliefs through authentic science experiences</td>
<td>Joerg Zumbach, University of Salzburg, Austria; Stephanie Moser, Technical University of Munich, Germany; Teresa Stem seder, University of Salzburg, Austria; Gabriele Gadermaier, University of Salzburg, Austria</td>
</tr>
<tr>
<td>Using causal diagrams to foster systems thinking in geography education</td>
<td>Marjolein Cox, KU Leuven, Belgium; An Steegen, KU Leuven, Belgium; Jan Elen, KU LEUVEN, Belgium</td>
</tr>
<tr>
<td>Metacognitive Support in Simulation-Based Physics Instruction</td>
<td>Ines Deibl, University of Salzburg, Austria; Stephanie Moser, Technical University of Munich, Germany; Joerg Zumbach, University of Salzburg, Austria</td>
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<td>Model-based reasoning in science education, assigning causality in drawing-based modeling</td>
<td>Wouter R. van Joolingen, Utrecht University, Netherlands</td>
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**ANNOTATIONS:**  
**THIS SESSION IS MOVED TO SESSION J: 30.**

### Session P: 4  
**Time:** 08:45-10:15  
**Location:** Pinni B - B4117  

**SINGLE PAPER: COGNITIVE SKILLS**

**Chair**  
Sigal Eden, Bar-Ilan University, Israel

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prealgebraic Reasoning in the Primary Grades</td>
<td>Sarah Powell, University of Texas at Austin, United States</td>
</tr>
<tr>
<td>The power of writing hands: Logical memory performance after handwriting and typing tasks</td>
<td>Satu-Maarit Frangou, University of Lapland, Finland</td>
</tr>
<tr>
<td>Cardiac vagal tone and inhibitory control predict pre-schoolers’ listening comprehension</td>
<td>Sara Scrimin, University of Padova, Italy; Lucia Mason, University of Padova, Italy</td>
</tr>
</tbody>
</table>
| Exploring the relations between physical fitness, executive functioning and low academic achievement | Anne de Bruijn, University of Groningen, Netherlands; Esther Hartman, University Medical Center Groningen / University of Groningen, Netherlands; Danny Kostons, University of Groningen, Netherlands; Chris Visscher, University Medical Center Groningen/ University of Groningen, Netherlands; Roel J. Bosker, Rijksuniversiteit Groningen, Dept of Education and GION, Netherlands  

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### Session P: 5

**Time:** 08:45-10:15  
**Location:** Virta - 109

#### SINGLE PAPER: EDUCATIONAL EFFECTIVENESS AND LEARNING WITH COMPUTERS

**Chair**  
Annelies Kreis, Zurich University of Teacher Education, Switzerland

**Emotion regulation during severe classroom disruptions**  
Irina Rosa Kumschick, Freie Universität Berlin, Germany; Valentina Piwowar, Freie Universität Berlin, Germany; Felicitas Thiel, Freie Universität Berlin, Germany

**The Effects of Nine-Week Summer Vacation on Austrian Students in Lower Secondary Education**  
Manuela Paechter, University of Graz, Austria; Silke Luttenberger, University of Teacher Education Styria, Austria; Ilona Papousek, University of Graz, Austria; Elisabeth Weiss, University of Graz, Austria; Sigrid Wimmer, University of Graz, Austria; Andreas Fink, University of Graz, Austria

**Integrated SFON enhancement with computerized arithmetical training**  
Minna M Hannula-Sormunen, University of Turku, Finland; Anna Alanen, University of Turku, Finland; Jake McMullen, University of Turku, Finland; Erno Lehtinen, University of Turku, Finland

**Differences Among Pre-Service Teachers’ TPACK**  
Teemu Valtosen, University of Eastern Finland, Finland; Sini Kontkanen, University of Eastern Finland, Finland; Jari Kukkonen, University of Eastern Finland, Finland; Susanna Pöntinen, University of Eastern Finland, Finland; Erikko Sointu, University of Eastern Finland, Finland; Kati Mäkitalo-Siegl, University of Eastern Finland, Finland

### Session P: 6

**Time:** 08:45-10:15  
**Location:** Pinni B - B3116

#### SINGLE PAPER: TEACHING AND INSTRUCTION - B

**Chair**  
Toni Rogat, Purdue University, United States

**Teacher motivation and instructional behavior – Does the school make a difference?**  
Doris Holzberger, Technical University of Munich (TUM), Germany

**Scaffolding in the open classroom. Are there different patterns in teachers’ supportive behaviours?**  
Antonia Scholkmann, University of Hamburg, Germany; Jens Siemon, University of Hamburg, Germany; Tekla Paulsen, University of Hamburg, Germany

**Teachers’ experiences of mixed peer-mentoring groups of in-service and pre-service teachers**  
Ulla Kiviniemi, University of Jyväskylä, Finland; Pälvi Tyrvää, University of Jyväskylä, Finland; Hannu Heikkinen, University of Jyväskylä, Finland

**Technology-enhanced learning: Content and prosodic features of teacher–student interactions**  
Raija Hamalainen, University of Jyväskylä, Finland; Teija Waaramaa, University of Tampere, Finland; Joni Länsä, University of Jyväskylä, Finland; Anne-Maria Laukkanen, University of Tampere, Finland; Bram De Wever, Ghent University, Belgium
### Session P: 7 | Time: 08:45-10:15 | Location: Main Building E - E350

**SINGLE PAPER: SOCIAL INTERACTION IN LEARNING AND INSTRUCTION - C**

<table>
<thead>
<tr>
<th>Chair</th>
<th>The effects of multimodal representations and discourse on students during inquiry science</th>
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<tbody>
<tr>
<td></td>
<td>Robyn Gillies, The University of Queensland, Australia; Bernie Baffour, The University of Queensland, Australia</td>
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<tr>
<th>Chair</th>
<th>Sibling effects on achievement test scores in large scale assessments</th>
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<td>Christine Schmid, German Institute for International Educational Research (DIPF), Germany</td>
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<tr>
<th>Chair</th>
<th>Exploring whole class dialogues in computer-supported science learning settings</th>
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<tbody>
<tr>
<td></td>
<td>Anniken Furberg, University of Oslo, Norway; Kenneth Silseth, University College of Southeast Norway, Norway</td>
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<tr>
<th>Chair</th>
<th>Supporting students’ conceptual sense-making with multimodal representations in science learning</th>
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<tr>
<td></td>
<td>Line Ingultsen, University of Oslo, Norway; Anniken Furberg, University of Oslo, Norway</td>
</tr>
</tbody>
</table>

**ANNOTATIONS:**

*IDA KUKLIANSKY CHAIRS SESSION D: 30 AND IS REPLACED BY TERHI MÄNTYLÄ.*

*THE PRESENTATION BY ROBYN GILLIES (THE EFFECTS OF MULTIMODAL REPRESENTATIONS AND DISCOURSE ON STUDENTS DURING INQUIRY SCIENCE) IS CANCELLED.*

### Session P: 8 | Time: 08:45-10:15 | Location: Virta - 113

**SINGLE PAPER: COMPREHENSION OF TEXT AND GRAPHICS - B**

<table>
<thead>
<tr>
<th>Chair</th>
<th>What degree of instructional support is helpful for learner-generated drawing?</th>
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<tbody>
<tr>
<td></td>
<td>Steffen Schmidgall, Leibniz-Institut für Wissensmedien, Germany; Alexander Eitel, University of Freiburg, Germany; Katharina Scheiter, Leibniz-Institut für Wissensmedien, Germany</td>
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<thead>
<tr>
<th>Chair</th>
<th>Task Experience and Layout Influence the Negative Effect of Unnecessary Information on Learning</th>
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<tbody>
<tr>
<td></td>
<td>Gertjan Rop, Erasmus University Rotterdam, Netherlands; Anne Schueler, Leibniz-Institut für Wissensmedien, Germany; Peter Verkoeijen, Erasmus University Rotterdam, Netherlands; Katharina Scheiter, Leibniz Institut für Wissensmedien, Tübingen, Germany; Tamara Van Gog, Utrecht University, Netherlands</td>
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</tbody>
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<thead>
<tr>
<th>Chair</th>
<th>Memory for textual conflicts predicts sourcing when adolescents read multiple expository texts</th>
</tr>
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<tr>
<td></td>
<td>Elisabeth Stang Lund, University of Oslo, Norway; Ivar Bråten, University of Oslo, Norway; Eva Wennås Brante, University of Oslo, Norway; Helge Strømsø, University of Oslo, Norway</td>
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<tr>
<th>Chair</th>
<th>Should I get a flu shot? The contribution of critical thinking to argumentation skills</th>
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<td></td>
<td>Christian Tarchi, University of Florence, Italy</td>
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SATURDAY, 2 SEPTEMBER 2017
### Session P: 9
**Time:** 08:45-10:15  
**Location:** Linna - K103

**SINGLE PAPER: HIGHER EDUCATION - F**

**Chair**  
Marilou Bélisle, Université de Sherbrooke, Canada

**Relations between students’ perceptions of the teaching-learning environment and engagement**  
Kaire Uiboleht, University of Tartu, Estonia; Mari Karm, University of Tartu, Estonia; Lisa Postareff, University of Helsinki, Finland

**Are distance education students different than college students in their learning strategies use?**  
Karel Kreijns, Open University of the Netherlands, Netherlands; Celeste Meijis, Open University, Netherlands; Joyce Neroni, Open University of the Netherlands, Netherlands; Jérôme Gijseelaers, Open University of the Netherlands, Netherlands; Ruslan Leontjevas, Open University of the Netherlands, Netherlands; Paul A. Kirscchner, Open University of the Netherlands, Netherlands; Renate de Groot, Open University of the Netherlands, Netherlands

**Using the Double-edged Sword: Instructors’ Approaches to Diversity at a University in Hong Kong**  
Tracy Zou, The University of Hong Kong, Hong Kong

**Students’ perception of flipped classroom in university courses**  
Erikko Sointu, University of Eastern Finland, Finland; Teemu Valtonen, University of Eastern Finland, Finland; Laura Hiristo, University of Eastern Finland, Finland; Kati Mäkitalo-Siegl, University of Eastern Finland, Finland; Markku Saarelainen, University of Eastern Finland, Finland; Lasse Heikkinen, University of Eastern Finland, Finland; Anna Kaasinen, University of Eastern Finland, Finland; Jyri Manninen, University of Eastern Finland, Finland

### Session P: 10
**Time:** 08:45-10:15  
**Location:** Main Building A - A05

**SINGLE PAPER: SPECIAL EDUCATIONAL NEEDS**

**Chair**  
Nadia Leroy, Université Grenoble Alpes, France

**Dyslexia in Adolescents: Sharing Insights from a Longitudinal Study**  
Eva Wernås Brante, University of Oslo, Norway; Peggy L. Anderson, Metropolitan State University of Denver, United States

**Barriers for Universal Design for Learning (UDL) among higher education students with disabilities**  
Júlia Grifí Freixenet, Vrije Universiteit Brussel (VUB), Belgium; Katrien Struyven, Vrije Universiteit Brussel, Belgium; Caroline Andries, Vrije Universiteit Brussel (VUB), Belgium

**Evaluation of a computer-based training for enhancing arithmetic skills in math-disabled children**  
Joerg-Tobias Kuhn, University of Münster, Germany; Christin Schwenk, WWU Muenster, Germany; Leonie Maria Strehe, WWU Muenster, Germany; Julia Raddatz, WWU Muenster, Germany; Christian Dobel, University of Jena, Germany; Heinz Holling, WWU Muenster, Germany

**The development of at-risk children’s reading skills and motivation during early school years**  
Marja-Kristiina Lerkkänen, University of Jyväskylä, Finland; Noona Kiuru, University of Jyväskylä, Finland; Anna-Maija Poikkeus, University of Jyväskylä, Finland

**Annotations:**

*THE PRESENTATION BY MARJA-KRISTIINA LERKKÄNEN (THE DEVELOPMENT OF AT-RISK CHILDREN’S READING SKILLS AND MOTIVATION DURING EARLY SCHOOL YEARS) IS CANCELLED.*

*THIS SESSION IS CHAIRED BY MILLA RÄISÄNEK, REPLACING NADIA LEROY.*
### SINGLE PAPER: LEARNING AND DEVELOPMENT IN EARLY CHILDHOOD - D

**Chair**
Tim Corcoran, Deakin University, Australia

**Distinguishing Stimulating from Supporting Maternal Interaction Behavior in Infancy**
Anja Linberg, University of Bamberg, Germany; Jan-David Freund, University of Bamberg, Germany; Sabine Weinert, University of Bamberg, Germany

**Differences and similarities in children’s acquisition of different implicature types**
Gerlinde Große, Frühkindliche Bildungsforschung, Germany; Cornelia Schulze, Leipzig University, Germany; Michael Tomasello, Max Planck Institute for Evolutionary Anthropology, Germany; Napoleon Katsos, University of Cambridge, UK, United Kingdom

**Impact of Early Childhood Education and Care on Socioemotional Development: A Meta-Analysis**
Hannah Ulferts, Freie Universität Berlin, Germany; Ana Susac, Freie Universität Berlin, Germany; Yvonne Anders, Freie Universität Berlin, Germany

**Teachers Assessing Pre-Reading Skills**
Riitta Virinkoski, University of Jyväskylä, Finland; Mari-Jaana Lerkkanen, University of Jyväskylä, Finland; Mikko Aro, University of Jyväskylä, Finland; Leena Holopainen, University of Eastern Finland, Finland; Kenneth Eklund, University of Jyväskylä, Finland

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**ANNOTATIONS:**
THIS SESSION IS CHAIRED BY CARLA QUESADA PALLARES. TIM CORCORAN WILL CHAIR SESSION B: 5.

THE PRESENTATION BY HANNAH ULFERTS (IMPACT OF EARLY CHILDHOOD EDUCATION AND CARE ON SOCIOEMOTIONAL DEVELOPMENT: A META-ANALYSIS) IS CANCELLED.

### SINGLE PAPER: MOTIVATION AND EMOTION - D

**Chair**
Jakob Tesch, DZHW - German Centre for Research on Higher Education and Science Studies, Germany

**Can Students Differentiate Between Dimensions of Need-Supportive Teaching? An Experimental Study**
Martijn Leenknecht, Roosevelt Center for Excellence in Education, Netherlands; Lisette Wijnia, Erasmus University Rotterdam & University College Roosevelt, Netherlands; Sofie Loyens, University College Roosevelt, Netherlands; Remigius (Remy) Rikers, UCR / Utrecht University, Netherlands

**An intervention fostering abilities to regulate achievement emotions with secondary school students**
Daniela Raccanello, University of Verona, Italy

**University Student’s Daily Affect, Sleep, and Motivation: Are they related to Learning Outcomes?**
Tanja Könen, Goethe-Universität Frankfurt, Germany; Julia Karbach, Goethe-Universität Frankfurt, Germany

**Dimensional Comparison Effects of Students’ Achievements in Multiple Domains on their Task Values**
Hanna Gaspard, University of Tübingen, Germany; Yi Jiang, University of Tübingen, Germany; Herb Marsh, Australian Catholic University, Australia; Benjamin Nagengast, Eberhard Karls Universität Tübingen, Germany; Ulrich Trautwein, University of Tübingen, Germany; Allan Wigfield, University of Maryland, United States

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**ANNOTATIONS:**
THIS SESSION WILL BE CHAIRED BY HILLARY SWANSON, REPLACING JAKOB TESCH.
<table>
<thead>
<tr>
<th>Session P: 13</th>
<th>Time: 08:45-10:15</th>
<th>Location: Main Building C - C6</th>
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<tr>
<td><strong>SINGLE PAPER: ASSESSMENT AND EVALUATION - B</strong></td>
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<tr>
<td><strong>Chair</strong></td>
<td><strong>How to evaluate the learning outcomes of digital storytelling?</strong></td>
<td>Veera Kallunki, University of Helsinki, Finland; Marianne Vivitsou, University of Helsinki, Finland; Hannele Niemi, University of Helsinki, Finland</td>
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<tr>
<td>Sarah Howard, University of Wollongong, Australia</td>
<td><strong>How do academics conceptualise and assess engagement? A review of classroom engagement measures</strong></td>
<td>Joanna Tai, Deakin University, Australia; Rola Ajawi, Deakin University, Australia</td>
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<td><strong>Assessing self-reflections in medical education using Comparative Judgement</strong></td>
<td>Liesje Coertjens, Université catholique de Louvain (UCL), Belgium; Marije Lesterhuis, University of Antwerp, Belgium; Benedicte De Winter, University of Antwerp, Belgium; Sven De Maeyer, University of Antwerp, Belgium; Nele Michels, University of Antwerp, Belgium</td>
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<td><strong>Using comparative judgement for peer assessment</strong></td>
<td>Maarten Goossens, University of Antwerp, Belgium; Marije Lesterhuis, University of Antwerp, Belgium; Renske Bouwer, University of Antwerp, Belgium; Roos Van Gasse, University of Antwerp, Belgium; Sven De Maeyer, university Antwerp, Belgium</td>
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<tr>
<th>Session P: 14</th>
<th>Time: 08:45-10:15</th>
<th>Location: Pinni A - A1081</th>
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<tbody>
<tr>
<td><strong>SINGLE PAPER: TEACHING AND TEACHER EDUCATION - H</strong></td>
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<tr>
<td><strong>Chair</strong></td>
<td><strong>Teachers' perceived professional Space and their Agency</strong></td>
<td>Helma Oolbekink-Marchand, Radboud University Nijmegen, Netherlands; Linor Hadar, University of Haifa, Faculty of Education, Israel; Kari Smith, Norwegian University of Science and Technology, Norway</td>
</tr>
<tr>
<td>Ralph Schumacher, ETH Zurich, Switzerland</td>
<td><strong>Practitioners Training Needs for CLIL Teaching and Implementation: the Stakeholders Perspective</strong></td>
<td>Laura Pons Segui, University of Barcelona, Spain</td>
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<td><strong>The beginning teachers’ support network: An important ingredient in the recipe of job satisfaction?</strong></td>
<td>Laura Monique Thomas, Ghent University, Belgium; Ruben Vanderlinde, Ghent University, Belgium; Melissa Tuytens, Ghent University, Belgium; Geert Devos, Ghent University, Belgium; Geert Kelchtermans, University of Leuven, Belgium</td>
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<tr>
<td></td>
<td><strong>Teacher identity, beliefs and technology-related well-being</strong></td>
<td>Antti Syvänen, University of Tampere, Finland; Jaana-Pia Mäkiniemi, University of Tampere, Finland</td>
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</tbody>
</table>
### Session P: 15

**Time:** 08:45-10:15  
**Location:** Main Building A - A32

### SINGLE PAPER: TEACHING AND TEACHER EDUCATION - I

#### Chair
Elsa Eiriksdottir, University of Iceland, Iceland

#### Transforming the classroom experience for trainee teachers
Miguel Nussbaum, Pontificia Universidad Católica de Chile, Chile; Camila Barahona, Pontificia Universidad Católica de Chile, Chile

#### Future teachers’ learning gains in the field of German as a second language
Jennifer Paetsch, University of Bamberg, Germany; Fränze Sophie Wagner, Humboldt-Universität zu Berlin, Germany; Annkathrin Dansow, Humboldt-University Berlin, Germany

#### Measuring preservice teachers’ professional vision of inclusive education: videography instrument
Karolien Keppens, Ghent University, Belgium; Ruben Vanderlinde, Ghent University, Belgium

#### Pre-service Teachers’ TPACK and Intentions to Use ICT in Teaching
Jari Kukkonen, University of Eastern Finland, Finland; Teemu Valtonen, University of Eastern Finland, Finland; Erikko Sointu, University of Eastern Finland, Finland

**ANNOTATIONS:**

THIS SESSION WILL BE CHAIRMED BY MINNA LAKKALA, REPLACING ELSA EIRIKSDOTTIR.

### Session P: 16

**Time:** 08:45-10:15  
**Location:** Main Building D - D11

### SINGLE PAPER: MOTIVATION, ATTITUDES AND BELIEFS

#### Chair
Baerbel Fuerstenau, TU Dresden, Germany

#### 'I love to teach them about my subject': Starting preservice-teachers motives to teach.
Marjon Fokkens-Bruinsma, University of Groningen, Netherlands; Ellen Jansen, University of Groningen, Netherlands; Els van Rooij, University of Groningen, Netherlands; Esther Caninus, University of Oslo, Faculty of Education, Norway

#### Measuring Primary Children’s Images of and Attitude toward Curiosity
Tim Post, University of Twente, Netherlands; Juliette Walma van der Molen, University of Twente, Netherlands

#### Subtypes of emotion regulation: exploring patterns in classroom behaviour
Lysandra Sinclaire-Harding, University of Cambridge, United Kingdom; David Whitebread, University of Cambridge, United Kingdom

#### Do private uplifts and hassles affect teachers’ emotional exhaustion? Results from a diary study
Juliane Schmidt, Leibniz Institute for Science and Mathematics Education (IPN), Germany; Uta Klusmann, Leibniz Institute for Science and Mathematics Education (IPN), Germany; Oliver Lüdtke, Leibniz-Institute for Science and Mathematics Education (IPN) AND Centre for International Student Assessment, Germany

**ANNOTATIONS:**

THE PRESENTATION BY JULIANE SCHMIDT (DO PRIVATE UPLIFTS AND HASSLES AFFECT TEACHERS’ EMOTIONAL EXHAUSTION? RESULTS FROM A DIARY STUDY) IS CANCELLED.

THE PRESENTATION BY LYSDANDRA SINCLARE-HARDING (SUBTYPES OF EMOTION REGULATION: EXPLORING PATTERNS IN CLASSROOM BEHAVIOUR) IS CANCELLED.
### Session P: 17 | Time: 08:45-10:15 | Location: Linna - Väinö Linna (K104)

**SINGLE PAPER: MOTIVATION AND EMOTION - G**

<table>
<thead>
<tr>
<th>Chair</th>
<th>From School is Cool to We don’t Need No Education: Predictors of School Alienation</th>
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<tr>
<td></td>
<td>Kaja Marcin, University of Bern, Switzerland; Tina Hascher, University of Bern, Switzerland</td>
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</tbody>
</table>

**Control and value appraisals predict enjoyment and boredom in primary school children**

|       | Dave Putwain, Liverpool John Moores University, United Kingdom; Wendy Symes, University of Munich, Germany; Sandra Becker, University of Munich, Germany; Reinhard Pekrun, Ludwig-Maximilians-Universität (LMU), Germany |

**Are we alienating our digitally competent students? Consequences for academic well-being.**

|       | Lauri Hietajärvi, University of Helsinki, Finland; Katarina Salmela-Aro, Helsinki Collegium for Advanced Studies, Finland; Kai Hakkarainen, University of Helsinki, Finland; Kirsti Lonka, University of Helsinki, Finland |

**Students’ engagement in student-centered versus teacher-centered STEM learning environments**

|       | Annemie Struyf, University of Antwerp, Belgium; Haydée De Loof, University of Antwerp, Belgium; Jelle Boeve-de Pauw, University of Antwerp, Belgium; Peter Van Petegem, University of Antwerp, Belgium |

### Session P: 18 | Time: 08:45-10:15 | Location: Main Building A - A4

**SINGLE PAPER: TEACHER PROFESSIONAL DEVELOPMENT - E**

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<thead>
<tr>
<th>Chair</th>
<th>Who does take part in which kind of teacher professional development?</th>
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<td>Michael Besser, Leuphana University of Lüneburg, Germany; Dominik Leiss, Leuphana University of Lüneburg, Germany</td>
</tr>
</tbody>
</table>

**Developmental tasks for kindergarten teachers at their career start in kindergartens**

|       | Sabine Leineweber, University of Applied Sciences and Arts Northwestern Switzerland, Switzerland |

**Individual characteristics of teacher candidates: Re-examining the “negative selection” hypothesis**

|       | Julia-Carolin Brachem, DZHW - German Centre for Research on Higher Education and Science Studies, Germany; Hildegard Schaeper, DZHW - German Centre for Research on Higher Education and Science Studies, Germany |

**Preservice Math Teachers’ Implementation of Tasks and Links with Mathematical Knowledge for Teaching**

|       | Engin Ader, Bogazici University, Turkey |

**ANNOTATIONS:**

THIS SESSION WILL BE CHAired BY JEAN-MICHELBOUCHEIX, REPLACING CAROLINE MANSFIELD.
SINGLE PAPER: MOTIVATION AND EMOTION - H

Chair
Thomas Cochrane, New Zealand

Mediating Role of Basic Needs: Parental Conditional Regard, Teacher Autonomy Support and Well-Being
Ayesenur Alp, Middle East Technical University, Turkey; Aylan Koçak, Hacettepe University, Turkey; Athanasios Mouratidis, Hacettepe University, Turkey

Learners’ habitual social comparisons can hinder effective learning partner choice
Josephine Neugebauer, University of Freiburg, Germany; Kai Sassenberg, Leibniz-Institut für Wissensmedien (IWM), Germany; Devin G. Ray, The School of Psychology, Aberdeen, United Kingdom

Dimensional Comparisons in Primary School: A Validation of the Generalized I/E Model
Christoph Niepel, University of Luxembourg, Luxembourg; Samuel Greiff, University of Luxembourg, Luxembourg; Ulrich Keller, University of Luxembourg, Luxembourg; Antoine Fischbach, University of Luxembourg, Luxembourg

The Relevance of Teachers’ Autonomy Support at Work for Students’ Perception of Instruction
Barbara Otto, Ludwigshurg University of Education, Germany; Natalie Vannini, Goethe-Universität Frankfurt, Germany; Nir Madjar, School of Education, Bar-Ilan University, Israel

ANNOTATIONS:
THE PRESENTATION BY JOSEPHINE NEUGEBAUER (LEARners’ HABITUAL SOCIAL COMPARISONS CAN HINDER EFFECTIVE LEARNING PARTNER CHOICE) IS CANCELLED.

SINGLE PAPER: INSTRUCTIONAL DESIGN - D

Chair
Kati Keski-Mäenpää, University of Jyväskylä, Finland

How does the presentation of source information affect processing of multiple documents?
Martin Merkt, Leibniz-Institut für Wissensmedien, Germany

Investigating task difficulty and generativity on the learning effect of delayed instruction
Junseong Huang, National Institute of Education, Singapore; Rachel Lam, ETH Zurich, Switzerland; Manu Kapur, ETH Zurich, Switzerland

Do self-generated symbolic representations support performance in propositional logic items?
Sarah Malone, Saarland University, Germany; Natalie Ott, Saarland University, Germany; Markus Vogel, University of Education Heidelberg, Germany; Roland Bruenken, Saarland University, Germany

A Blended-Learning Higher Education Seminar with Learning Analytics Support
Nicoae Nistor, Ludwig-Maximilians-Universität (LMU), Germany; Mihai Dascalu, "Politehnica" University Bucharest, Romania; Larise Lucia Stavarache, "Politehnica" University Bucharest, Romania; Stefan Trausan-Matu, "Politehnica" University Bucharest, Romania
**SINGLE PAPER: TEACHING AND TEACHER EDUCATION - K**

**Chair**  
Héctor Javier Piñeira Díaz, University of Oulu, Finland

**Using Statistics as a Way of Interpreting Social and Historical Events**  
Zuhal Yılmaz, Yeditepe Üniversitesi, Turkey; Kübra Ergüll, Yeditepe Üniversitesi, Turkey; Gursu Asik, Bahcesehir University, Turkey

**Europeanisation in teacher education: Framing the mobility of European policies and practices**  
Vasileios Symeonidis, University of Innsbruck, Austria; Christian Kraler, Teacher Education and School Research, Austria

**Representing teachers’ domain-specific conceptions of financial literacy by using concept maps**  
Seraina Leumann Sow, Swiss Federal Institute for Vocational Education and Training, Switzerland; Carmela Aprea, Friedrich Schiller University Jena, Germany

**It’s all about learning opportunity? The influence of learning opportunities on economic knowledge**  
Christin Siegfried, Goethe-Universität Frankfurt, Germany

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**SINGLE PAPER: WORKPLACE LEARNING**

**Chair**  
Marold Wosnitza, RWTH Aachen University, Germany

**Feedback and learning from errors in the insurance industry**  
Regina Mulder, University of Regensburg, Germany; Veronika Anselmann, University of Regensburg, Germany

**Development and validation of a short scale for measuring innovative work behaviour**  
Gerhard Messmann, University of Regensburg, Germany; Regina H. Mulder, Institute of Educational Science, University of Regensburg, Germany

**Effects of perceived feedback culture and work motivation on informal learning after feedback**  
Gerhard Messmann, University of Regensburg, Germany; Regina H. Mulder, Institute of Educational Science, University of Regensburg, Germany

**Learning at work: A mixed methods approach on workplaces as learning environments**  
Heta Rintala, Tampere University of Technology, Finland; Petri Nokelainen, Tampere University of Technology, Finland; Laura Pylväs, University of Tampere, Finland
### SYMPOSIUM: VALIDITY OF LONGITUDINAL ASSESSMENTS: CAPTURING (INSTRUCTIONAL EFFECTS ON) STUDENTS’ LEARNING GROWTH

**Chair**
Alexander Naumann, German Institute for International Educational Research (DIPF), Germany

**Discussant**
Detlev Leutner, University of Duisburg-Essen, Germany

**Measuring the instructional sensitivity of items**
Alexander Naumann, German Institute for International Educational Research (DIPF), Germany; Johannes Hartig, German Institute for International Educational Research (DIPF), Germany; Jan Hochweber, University of Teacher Education St. Gallen, Switzerland

**Developing Instructionally Sensitive Assessments**
Maria Araceli Ruiz-Primo, Stanford University, United States; Min Li, University of Washington, United States

**Using item properties to predict the instructional sensitivity of test items**
Jan Hochweber, University of Teacher Education St. Gallen, Switzerland; Alexander Naumann, German Institute for International Educational Research (DIPF), Germany; Johannes Hartig, German Institute for International Educational Research (DIPF), Germany; Iris Kleinbub, University of Education Ludwigsburg, Germany; Stephanie Musow, University of Teacher Education St.Gallen, Switzerland

**Construction of a test series for learning progress assessment in reading using rule-based design**
Natalie Foerster, University of Münster, Germany; Joerg-Tobias Kuhn, University of Münster, Germany; Jasmin Munske, University of Münster, Germany; Elmar Souvignier, University of Münster, Germany

### SYMPOSIUM: EARLY CHILDHOOD EDUCATORS’ PROFESSIONAL COMPETENCES FOSTERING MATHS AND SCIENCE

**Chair**
Franziska Vogt, University of Teacher Education St.Gallen, Switzerland

**Discussant**
Yvonne Anders, Freie Universität Berlin, Germany

**Teaching for Conceptual Change in Preschool: Teachers’ Professional Beliefs, Knowledge and practice**
Miriam Leuchter, University of Koblenz - Landau, Germany; Henrik Saalbach, University of Leipzig, Germany; Ueli Studhalter, ETH Zurich, Switzerland; Annette Tettenborn, University of Teacher Education of Lucerne, Switzerland

**Preschool Teachers’ Leadership in Science Education – Making Professional Competencies Visible**
Ornit Spektor-Levy, Bar-Ilan University, Israel; Anat Abramovich, Technion-Israel Institute of Technology, Israel; Taly Shechter, The School of Education, Bar Ilan University, Israel

**Tailored mathematical support during play-based learning – a close look at educators’ competences**
Andrea Wullschlegler, University of Zurich, Switzerland; Rita Stebler, University of Zurich, Switzerland

**Modeling and Measuring Professional Competence of Early Childhood Educators in Mathematics**
Simone Dunekacke, Leibniz Institute for Science and Mathematics Education (IPN), Germany; Selma Seemann, IPN Kiel, Germany; Aiso Heinze, Leibniz Institute for Science and Mathematics Education (IPN), Germany; Miriam Leuchter, University of Koblenz - Landau, Germany; Anke Lindmeier, Leibniz Institute of Science and Mathematics Education (IPN), Germany; Elisabeth Moser Opitz, University of Zurich, Switzerland; Franziska Vogt, University of Teacher Education St.Gallen, Switzerland

**Annotations:**
This symposium is moved to Session H: 27 in Room: Main Building A - A2A and replaced by the SIG 5 Invited Symposium “Different Approaches to Improve the Home Learning Environment and Child Outcomes”.
SYMPOSIUM: INFLUENCES ON TEACHERS’ JUDGMENT ACCURACY CONCERNING STUDENT ACHIEVEMENT AND EDUCATIONAL TRANSITIONS

Chairs
Barbara Gasteiger-Klicpera, University of Graz, Austria; Edvina Bečić, University of Graz, Austria

Discussant
Janneke van de Pol, Utrecht University, Netherlands

How accurately do teachers judge their students' reading abilities?
Results of a Multilevel Analysis
Barbara Gasteiger-Klicpera, University of Graz, Austria; Lisa Paleczek, University of Graz, Austria; Susanne Seifert, University of Graz, Germany

Are teachers able to predict students’ reading development?
Alfred Schabmann, University of Cologne, Germany; Barbara Maria Schmidt, Universität zu Köln/University of Cologne, Germany; Thomas Hennemann, University of Cologne, Germany

Teachers’ expertise in assessing written composition
Ann-Kathrin Hennes, University of Cologne, Germany; Barbara Maria Schmidt, Universität zu Köln/University of Cologne, Germany; Igor Ospov, Universität zu Köln/University of Cologne, Germany; Alfred Schabmann, University of Cologne, Germany

Changes in the accuracy of teachers’ transition decisions following instruction and training
Ineke Pit-ten Cate, University of Luxembourg, Luxembourg; Sabine Krolak-Schwerdt, University of Luxembourg, Luxembourg; Thomas Hoerstermann, University of Luxembourg, Luxembourg; Sabine Glock, University of Wuppertal, Germany

ANNOTATIONS:
THIS SYMPOSIUM IS MOVED TO SESSION P: 24 IN ROOM: MAIN BUILDING A - A2A.

SYMPOSIUM: UNCOVERING PROBLEM-SOLVING PROCESSES: THEORETICAL APPROACHES AND THE POTENTIAL OF LOG FILE ANALYSES

Chairs
Kristina Kögler, Germany; Stephan Abele, Germany

Discussant
Dirk Ifenthaler, University of Mannheim, Germany

Uncovering Visual Problem-Solving Processes: How Logdata can Inform Theory
Jeroen Van Merrienboer, Maastricht University, Netherlands

Stephan Abele, Institute of Educational Vocation and Vocational Didactics, Germany

What Makes a Good Problem Solver? A Log File Analysis of Activity Workflows in an Office Simulation
Andreas Rausch, University of Mannheim, Germany; Steffen Brandt, Open Campus.sh/Kiron, Germany; Kristina Kögler, University of Hohenheim, Germany; Clemens Froetschl, University of Bamberg, Germany; Michael Bergrab, University of Bamberg, Germany

Collaborative Problem Solving Behavior: A Deep Dive into Log Files.
Maida Mustafic, University of Luxembourg, Luxembourg; Nick Schweitzer, University of Luxembourg, FLSHASE, Luxembourg; Katharina Herborn, University of Luxembourg, Luxembourg; Samuel Greiff, University of Luxembourg, Luxembourg

ANNOTATIONS:
### Session P: 27
**Time:** 08:45-10:15  
**Location:** Pinni A - A2089

**SYMPOSIUM: WHAT DOES IT TAKE TO BE MOTIVATED – THE IMPACT OF SOCIAL RELATIONSHIPS AND SOCIAL SKILLS**

**Chair**  
Frances Hoferichter, Germany

**Discussant**  
Rikka Hirvonen, University of Jyväskylä, Finland

**The motivating role of peers & teachers among Russian and Filipino students - A Motivation Typology**  
Frances Hoferichter, University of Greifswald, Germany; Olga Bakadorova, Ernst-Moritz-Arndt-University, Germany; Diana Raufelder, Ernst-Moritz-Arndt-University, Germany

**Grit in the Classroom: How to Improve Motivation and Learning Outcomes**  
Christian Krekel, London School of Economics and Political Science, United Kingdom

**Enhancing students’ motivation – the impact of teacher support and teacher-parent partnership**  
Charlott Rubach, University of Potsdam, Germany; Rebecca Lazarides, University of Potsdam, Germany

**Inter-individual differences in social motivation related to Self-determination & school-engagement**  
Alexander Lätsch, University of Greifswald, Germany; Diana Raufelder, Ernst-Moritz-Arndt-University, Germany

**Annotations:**  
This Symposium is moved to Session F: 25 in Room: Main Building A - A2B.

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### Session Q: 1
**Time:** 10:30-12:00  
**Location:** Main Building D - D10B

**SINGLE PAPER: MOTIVATION AND SECONDARY EDUCATION**

**Chair**  
Danny Kostons, University of Groningen, Netherlands

**Course design perception in MOOCs : comparing performance between on-campus and worldwide students**  
Sophie Dandache, Université catholique de Louvain (UCL), Belgium; Min Reuchamps, Université catholique de Louvain (UCL), Belgium; Pierre Baidewyns, Université catholique de Louvain (UCL), Belgium; Nathalie Schifino, Université catholique de Louvain (UCL), Belgium; Marianne Frennay, Université catholique de Louvain (UCL), Belgium

**Autonomy support and thwart in the classroom: triggers for teachers**  
Alexander Minnaert, University of Groningen, Netherlands; Kim Stroet, Leiden University, Netherlands; Marie-Christine Opdenakker, University of Groningen, Netherlands

**Micro-level views on task characteristics, situational interest and the use of learning strategies**  
Isolde Baumgartner, University of Passau, Germany; Matthias Boehm, University of Passau, Germany; Jutta Mägdefrau, University of Passau, Germany; Andreas Michler, University of Passau, Germany; Christoph Wecker, University of Passau, Germany

**Encouraging a career in science? A review of school effects on students’ future orientation in STEM**  
Sarah Reinhold, Technical University of Munich (TUM), Germany; Doris Holzberger, Technical University of Munich (TUM), Germany; Tina Seidel, Technische Universität München (TUM), Germany
### Session Q: 2  
**Time:** 10:30-12:00  
**Location:** Main Building D - D11

**SINGLE PAPER: TEACHING AND TEACHER EDUCATION - S**

**Chair**  
Paul Ayres, University of New South Wales, Australia

**Mathematics Teachers’ Attitudes Towards Homework and their Comparison to Science Teachers’ attitudes**  
Ida Kukliansky, Ruppin Academic Center, Israel; Haim Eshach, Ben-Gurion University of the Negev, Israel

**Task-Specific Difficulty Judgments of Teacher Students**  
Justine Stang, University of Passau, Germany; Detlef Urhahne, University of Passau, Germany

**Changes in Dealing with Requirements during Practical Training**  
Julia Kosinar, University of Applied Sciences and Arts Northwestern Switzerland, Switzerland; Ozlem Altin, University of Applied Sciences and Arts Northwestern Switzerland, Switzerland; Melanie Billich Knapp, University of Applied Sciences and Arts Northwestern Switzerland, Switzerland

**Teacher students’ experiences of flipped learning – Relations with learning orientations and goals?**  
Laura Hirsto, University of Eastern Finland, Finland; Sanna Väisänen, University of Eastern Finland, Finland

**ANNOTATIONS:**  
THE PRESENTATION BY IDA KUKLIANSKY (MATHEMATICS TEACHERS’ ATTITUDES TOWARDS HOMEWORK AND THEIR COMPARISON TO SCIENCE TEACHERS’ ATTITUDES) IS MOVED TO SESSION J: 20.  
THIS SESSION WILL BE CHAIRMED BY SARI YRJÄNÄINEN, REPLACING PAUL AYRES.

### Session Q: 3  
**Time:** 10:30-12:00  
**Location:** Main Building C - C7

**SYMPOSIUM: DIFFERENTIATED INSTRUCTION TO ADDRESS STUDENT DIVERSITY IN LEARNING: EFFECTS, PRACTICES AND TRAINING**

**Chair**  
Katrien Struyven, Vrije Universiteit Brussel, Belgium

**Organiser**  
Katrien Struyven, Vrije Universiteit Brussel, Belgium

**Discussant**  
Leonidas Kyriakides, University of Cyprus, Cyprus

**Cognitive effects of differentiation practices: A systematic review and meta-analysis**  
Marjolein Deunk, University of Groningen, Netherlands; Annemieke Smale-Jacobse, University of Groningen, Netherlands; Hester de Boer, University of Groningen, Netherlands; Simone Doolard, University of Groningen, Netherlands; Roel J. Bosker, Rijksuniversiteit Groningen, Dept of Education and GION, Netherlands

**Differentiated instruction in mixed-age classes – Results from a study in small, alpine schools**  
Robbert Smit, University of Teacher Education St.Gallen, Switzerland

**Training primary education teachers to differentiate: Effects on teaching and student learning**  
Evelyn Kroesbergen, Utrecht University, Netherlands; Eva van de Weijer-Bergsma, Utrecht University, Netherlands; Emilie Prast, Utrecht University, Netherlands; Johannes Van Luit, Utrecht University, Netherlands

**Differentiated instruction in secondary education: Results from a professional development programme**  
Wouter Smets, Karel de Grote University college, Belgium; Debbie Deneve, Karel de Grote Hogeschool Antwerpen, Belgium

**ANNOTATIONS:**  
THIS SYMPOSIUM IS MOVED TO SESSION L: 28 IN ROOM: MAIN BUILDING A - A3.
### SYMPOSIUM: TEACHER SELF-EFFICACY AND ITS DEVELOPMENT IN DIVERSE CONTEXTS

**Chair**  
Marjolein Zee, University of Amsterdam, Netherlands

**Discussant**  
Robert Klassen, University of York, United Kingdom

**Presentations**

- **Cognitive Processes Underlying Self-Efficacy in Expert, Novice, and Beginning Teachers**  
  Izabele Jonusaite, University of York, United Kingdom; Lisa Kim, University of York, United Kingdom; Robert Klassen, University of York, United Kingdom

- **Examining Preservice Teachers’ Enjoyment and Self-Efficacy Beliefs: A Cross-Lagged Panel Study**  
  David Morris, St. Mary’s College of Maryland, United States

- **Teaching Self-Efficacy and its Sources in Teacher Training Experiences in Physical Education**  
  Roberto Tadeu Iaonchite, Universidade Estadual Paulista, Brazil; Roraima A. Costa Filho, Sao Paulo State University, Brazil

- **Self-Efficacy for Teaching Special Populations in Two National Contexts**  
  Abigail Love, University of Kentucky, United States; Christen Dillon, University of Kentucky, United States; Ellen Usher, University of Kentucky, United States

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### SYMPOSIUM: ENHANCING LANGUAGE COMPETENCES AND READING OF SECOND LANGUAGE LEARNERS

**Chair**  
Annette Tettenborn, University of Teacher Education of Lucerne, Switzerland

**Organiser**  
Annette Tettenborn, University of Teacher Education of Lucerne, Switzerland

**Discussant**  
Petra Stanat, Humboldt-Universität zu Berlin, Germany

**Presentations**

- **Improving second language skills: Effects of focus on meaning and focus on form**  
  Jennifer Paetsch, University of Bamberg, Germany; Annkathrin Darsow, Humboldt-University Berlin, Germany; Anja Felbrich, Institute for Educational Quality Improvement (IQB), Germany; Petra Stanat, Institute for Educational Quality Improvement (IQB), Germany

- **How Stereotypes Effect Vocabulary Acquisition of Students with and without Immigrant Background**  
  Andreas Sander, TU Dortmund University, Germany; Annika Ohle, TU Dortmund, Germany; Lysann Zander, FU Berlin, Germany; Bettina Hannoer, FU Berlin, Germany; Nele MyElvany, Center for Research on Education and School Development, TU Dortmund University, Germany

- **Fostering Reading Comprehension and Self-Efficacy in Middle-School Social Studies**  
  Ana Taboada Barber, University of Maryland, United States

- **Extracurricular reading enhancement of third graders with German as a second language**  
  Catherine Naepflin, University of Teacher Education of Lucerne, Switzerland; Caroline Villiger, University of Teacher Education Bern, Switzerland; Isabelle Hugener, University of Teacher Education Lucerne (PH Luzern), Switzerland; Manuela Frommelt, University of Teacher Education Lucerne, Switzerland; Silke Hauti-Junghans, Pädagogische Hochschule FR, Switzerland; Erich Hartmann, Université de Fribourg, Switzerland
## SYMPOSIUM: THE USE OF RESEARCH METHODS TO STUDY LEARNING TRANSFER

**Chairs**  
Carla Quesada-Pallarès, Spain; Andreas Gegenfurtner, Germany  

**Discussant**  
Eva Kyndt, KU Leuven, Belgium

### Training transfer and the role of work environment support: A meta-analysis
Ashley Hughes, Michael E. DeBakey VA Medical Center and Baylor College of Medicine, United States; Stephanie Zajac, Rice University, United States; Amanda L. Woods, Rice University, United States; Eduardo Salas, Rice University, United States

### Using implementation intentions in a quasi-experimental design to improve learning transfer
Carla Quesada-Pallarès, Universitat de Manresa, Spain; Pilar Pineda, Universitat Autonoma de Barcelona, Spain

### The use of mixed-methods to study the learning transfer process in virtual communities of practice
Miren Fernández, University of the Balearic Islands, Spain; Victoria Marsick, Columbia University: Teachers College, United States

###Reconstructing the Why: A Qualitative Interview Study on Transfer of Training
Andreas Gegenfurtner, Technische Hochschule Deggendorf, Germany; Michael Hellwig, University of Regensburg, Germany

## SYMPOSIUM: CHILD LANGUAGE IN PRESCHOOL SETTINGS: DEVELOPMENT AND SUPPORT

**Chair**  
Ulla Licandro, Leibniz University of Hannover, Germany

**Discussant**  
Franziska Vogt, University of Teacher Education St.Gallen, Switzerland

### Narratives as a window into children’s emerging second language skills
Ulla Licandro, Leibniz University of Hannover, Germany

### Language Supporting Practices of Early Childhood Professionals – Results of the BiSS-Study aile
Christine Beckerle, Hannover University, Germany; Katja Mackowiak, Leibniz University of Hannover, Germany

### Let’s Talk – Developing an intervention to support preschool children’s oral language development
Gillian Lake, Oxford Brookes University, United Kingdom

### Early childhood professionals’ language support competence – comparing knowledge and practice
Nadine Itel, University of Teacher Education St.Gallen, Switzerland
### SYMPOSIUM: BARRIERS AND BIASES FOR FEMALES APPROACHING STEM CAREERS

**Chair**  
Manuela Paechter, University of Graz, Austria

**Discussant**  
Hanke Korpershoek, University of Groningen, Netherlands

<table>
<thead>
<tr>
<th>Topic</th>
<th>Authors</th>
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<tbody>
<tr>
<td>Barriers and biases for females in STEM careers</td>
<td>Bernhard Ertl, Bundeswehr University Munich, Germany</td>
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<td>Mathematics self-concept in New Zealand primary school students:</td>
<td>Penelope Watson, University of Auckland, New Zealand; Christine Rubie-Davies, University of Auckland, New Zealand;</td>
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<tr>
<td>Intervening to lower a barrier?</td>
<td>Kane Meissel, University of Auckland, New Zealand; Annaline Flint, University of Auckland, New Zealand; Lynda Garrett, The University of Auckland, New Zealand; Lyn McDonald, The University of Auckland, New Zealand</td>
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<td>Applying reconstructive social research to reveal barriers for female</td>
<td>Gernot Dreisiebner, University of Graz, Austria; Michaela Stock, University of Graz, Austria; Georg Tafner, Bundeszentrum für Professionalisierung in der Bildungsforschung, Austria</td>
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<td>apprentices in STEM</td>
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<td>Barriers in Gender-untypical Career Aspirations – Same Patterns for</td>
<td>Silke Luttenberger, University of Teacher Education Styria, Austria; Stephanie Toldo, University of Graz, Austria;</td>
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<tr>
<td>Females and Males?</td>
<td>Manuela Paechter, University of Graz, Austria</td>
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### SYMPOSIUM: LEARNING TO WRITE SYNTHESIS TEXTS PART 1; PROCESS STUDIES

**Chair**  
Elke Van Steendam, KU LEUVEN, Belgium

**Discussant**  
Elke Van Steendam, KU Leuven, Belgium

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<tr>
<th>Topic</th>
<th>Authors</th>
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<tbody>
<tr>
<td>Rewriting at the Word and Sentence Levels Predicts Children’s Essay</td>
<td>Deborah McCutchen, University of Washington, United States; Becky Logan Herrera, University of Washington, United States; Mary Northy, University of Washington, United States; Teixera Clark, University of Washington, United States; Emma Huey, University of Washington, United States</td>
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<tr>
<td>Content &amp; Structure Quality</td>
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<td>Synthesis writing: relations between writing processes and text quality, moderated by writing style</td>
<td>Nina Vandermeulen, University of Antwerp, Belgium; Brenda van den Broek, University of Antwerp, Belgium; Elke Van Steendam, KU Leuven, Belgium; Sarah Bernolet, University of Antwerp, Belgium; Gert Rijlaarsdam, University of Amsterdam, Netherlands</td>
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<tr>
<td>Variation in source use in argumentative writing in L1 and L2</td>
<td>Daphne van Weijen, University of Amsterdam, Netherlands; Gert Rijlaarsdam, University of Amsterdam, Netherlands</td>
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<tr>
<td>Influence of genre and task upon students’ compositional decisions for synthesis writing</td>
<td>Danielle Zawodny Wetzel, Carnegie Mellon University, United States; David Kaufer, Carnegie Mellon University, United States</td>
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**Session Q: 10** | **Time: 10:30-12:00** | **Location: Pinni B - B1096**

**SYMPOSIUM: THE QUALITY OF EXTENDED EDUCATION: RESULTS FROM SWEDEN, GERMANY AND SWITZERLAND**

**Chair**
Marianne Schuepbach, University of Bamberg, Germany

**Discussant**
Kristina Kumpulainen, University of Helsinki, Finland

- Quality measures for all-day schools in the context of federalism in Germany and output control
  Bettina Arnoldt, German Youth Institute, Germany; Peter Furthmüller, Deutsches Jugendinstitut, Germany

- Quality Aspects of Pupil-Activating Extracurricular Provisions at German All-Day Schools
  Stephan Kielblock, Justus Liebig University Giessen / Macquarie University Sydney, Germany; Johanna May Gaiser, Justus Liebig University Giessen, Germany

- Parent’s perceptions of the quality in Swedish school-age educare centres
  Anna Klerfelt, University of Jönköping, Sweden

- Quality-aspects of all-day schools in Switzerland: What affects academic and socio-emotional skills?
  Marianne Schuepbach, University of Bamberg, Germany; Lukas Frei, University of Berne, Switzerland; Wim Nieuwenboom, University of Bamberg, Germany; Benjamin von Allmen, University of Bern, Switzerland

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**Session Q: 11** | **Time: 10:30-12:00** | **Location: Pinni B - B1100**

**SYMPOSIUM: LEARNING ANALYTICS IN EDUCATIONAL PRACTICES: BARRIERS AND HOW THEY MAY BE OVERCOME.**

**Chair**
Bert Slof, Utrecht University, Netherlands

**Discussant**
Dragan Gasevic, University of Edinburgh, United Kingdom

- Humans vs. Computer-Simulated Agents as Collaboration Partners in CSCL-Environments
  Samuel Greiff, University of Luxembourg, Luxembourg; katharina herborn, University of Luxembourg, Luxembourg; nick schweitzer, University of Luxembourg, Luxembourg; maida mustafic, University of Luxembourg, Luxembourg

- What do teachers do with learning analytics? A case study in higher education
  Anouschka van Leeuwen, Utrecht University, Netherlands

- E-portfolio’s with learning analytics in teacher education: Teachers’ user experiences
  Pihel Hunt, University of Tartu, Estonia; geri silm, University of Tartu, Estonia; Liina Malva, University of Tartu, Estonia; Äli Leijen, University of Tartu, Estonia; Bert Slof, Utrecht University, Netherlands; Marieke van der Schaaf, Utrecht University, Netherlands

- Using big data to understand learning gains in knowledge and understanding in higher education
  Jekaterina Rogaten, Open University, United Kingdom; Bart Rienties, Open University UK, United Kingdom

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**Session Q: 12**  
Time: 10:30-12:00  
Location: Pinni B - B1097

### SYMPOSIUM: TRAINING SOURCE EVALUATION SKILLS: WHAT WORKS, FOR WHOM AND WHY?

**Chair**  
Marc Stadtlér, University of Münster, Germany

**Organisers**  
Jean-Francois Rouet, University of Poitiers, France; Marc Stadtlér, University of Münster, Germany

**Discussant**  
Sarit Barzilai, University of Haifa, Israel

**Teaching Sourcing in Upper-Secondary School**  
Eva Wennäs Brante, University of Oslo, Norway; Helge I. Strømsø, University of Oslo, Norway; Elisabeth Stang Lund, University of Oslo, Norway; Ivar Bråten, University of Oslo, Norway

**Learning to read critically: an intervention with people with intellectual disabilities**  
Ladislao Salmeron, University of Valencia, Spain; Pablo Delgado Herrera, University of Valencia, Spain; Inmaculada Fajardo, University of Valencia / Interdisciplinary Research Structure for Reading Research (ERI Lectura), Spain; Vicenta Ávila, University of Valencia / Interdisciplinary Research Structure for Reading Research (ERI Lectura), Spain

**“Critically Online”, Teaching 9th Graders to Evaluate and Use Source Information while Reading**  
Marc Stadtlér, University of Münster, Germany; Johanna Paul, University of Muenster, Germany; Ana Pérez, University of Poitiers, France; Ladislao Salmeron, University of Valencia, Spain; Mónica Macedo-Rouet, University of Paris 8, France; Rainer Bromme, University of Münster, Germany

**What’s with that source? Fostering 9th grade students’ critical thinking about authors and media**  
Mónica Macedo-Rouet, University of Paris 8, France; Ana Pérez, University of Poitiers, France; Anna Potocki, University of Poitiers, France; Johanna Paul, University of Muenster, Germany; Ladislao Salmeron, University of Valencia, Spain; Jean-Francois Rouet, University of Poitiers, France

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**Session Q: 13**  
Time: 10:30-12:00  
Location: Pinni B - B3118

### SYMPOSIUM: RETOOLING FOR EFFECTIVE, EFFICIENT, AND ENJOYABLE COLLABORATIVE LEARNING

**Chair**  
Paul A. Kirschner, Open University of the Netherlands, Netherlands

**Discussant**  
Kristine Lund, University of Lyon, France

**Providing emotional awareness in CSCL with an Emotion Awareness Tool**  
Mattia Fritz, University of Geneva, Switzerland; Mireille Betrancourt, University of Geneva, Switzerland

**The Widgets of Oz**  
Karel Kreijns, Open University of the Netherlands, Netherlands; Maren Scheffel, Open University of the Netherlands, Netherlands; Joop de Kraker, Open University of the Netherlands, Netherlands; Hendrik Drachsler, Open University of the Netherlands, Netherlands; Aad Slootmaker, Open University of the Netherlands, Netherlands

**Functions of Cognitive Group Awareness Tools**  
Daniel Bodemer, University of Duisburg-Essen, Germany

**Designing and implementing retrospective dashboards for socially shared regulated learning**  
Sanna Järvelä, University of Oulu, Finland; Jonna Malmberg, University of Oulu, Finland; Hanna Jarvenoja, University of Oulu, Finland; Héctor Javier Piñeira Diaz, University of Oulu, Finland; Muhterem Dindar, University of Oulu, Finland; Paul A. Kirschner, Open University of the Netherlands, Netherlands
### Session Q: 14
**Time:** 10:30-12:00
**Location:** Linna - K108

#### SYMPOSIUM: SPONTANEOUS MATHEMATICAL FOCUSING TENDENCIES

**Chair**
Joke Torbeys, KU LEUVEN, Belgium

**Organisers**
Joke Torbeys, KU Leuven, Belgium; Sophie Batchelor, Loughborough University, United Kingdom

**Discussant**
Minna M Hannula-Sormunen, University of Turku, Finland

**Spontaneous Focusing on Numerosity in Imitation and Verbal Task Contexts**
Sophie Batchelor, Loughborough University, United Kingdom; Jayne Pickering, Loughborough University, United Kingdom

**Young children’s spontaneous focusing on Arabic number symbols**
Sanne Rathé, KU Leuven, Belgium; Joke Torbeys, KU Leuven, Belgium; Bert De Smedt, KU Leuven - University of Leuven, Belgium; Lieven Verschaffel, KU LEUVEN, Belgium

**Spontaneous Focusing on Quantitative Relations as a Predictor of Rational Number Knowledge**
Jake McMullen, University of Turku, Finland; Minna Hannula-Sormunen, University of Turku, Finland; Erno Lehtinen, University of Turku, Finland

**Spontaneous quantitative relational reasoning: additive or multiplicative?**
Tine Degrande, KU Leuven, Belgium; Lieven Verschaffel, KU LEUVEN, Belgium; Jo Van Hoof, KU LEUVEN, Belgium; Wim Van Dooren, KU LEUVEN, Belgium

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### Session Q: 15
**Time:** 10:30-12:00
**Location:** Pinni B - B3109

#### SYMPOSIUM: STUDYING INTERACTION AND COLLABORATION IN HIGHER EDUCATION THROUGH DIFFERENT ANALYTICAL LENSES

**Chairs**
Mireille Hubers, University of Twente, Netherlands; David Boud, Australia

**Discussant**
Maaike Endedijk, University of Twente, Netherlands

**Students’ interactional meaning-making of assessment feedback viewed through a sociocultural lens**
Rachelle Esterhazy, University of Oslo, Norway; Crina Damsa, University of Oslo, Norway

**Process-oriented analysis of student teachers’ interaction during social regulation in collaboration**
Jaana Isohätälä, University of Oulu, Finland; Piia Naykki, University of Oulu, Finland; Sanna Järvelä, University of Oulu, Finland

**Exploring higher education teacher team learning using text mining analysis**
Rike Bron, University of Twente, Netherlands; Maaike Endedijk, University of Twente, Netherlands; Bernard Veldkamp, University of Twente, Netherlands

**The use of social network analysis to uncover faculty’s teaching interactions in higher education**
Piet Van den Bossche, University of Antwerp, Belgium; Sara Van Waes, University of Antwerp, Belgium; Sven De Maeyer, University of Antwerp, Belgium; Nienke Moolenaar, Utrecht University, Netherlands; Peter Van Petegem, University of Antwerp, Belgium
### SYMPOSIUM: THE ROLE OF SPELLING RESEARCH IN THE ADVANCEMENT OF PUBLIC GOOD.

| Chair | A free screening in kindergarten to predict spelling proficiency in grade 1: does it make sense?  
            Christel Van Vreckem, Artevelde University College, Belgium; Annemie Desoete, Ghent University / Artevelde University College, Belgium |
| Discussant | Improving conceptual knowledge in the writing system in kindergarten: an intervention study  
            Lucia Bigozzi, University of Florence, Italy; Christian Tarchi, University of Florence, Italy; Giuliana Pinto, University of Florence, Italy |
| | Measuring spelling competence: Proofreading and editing, or production from dictation?  
            Tessa Daffern, University of Canberra, Australia |
| | Writing skills and feeling of confidence of higher education students with dyslexia  
            Wim Tops, University of Groningen, Netherlands |

**Annotations:**  
The presentation by Wim Tops (Writing skills and feeling of confidence of higher education students with dyslexia) is cancelled.

### SYMPOSIUM: EMOTIONS AND MOTIVATION IN MATHEMATICS EDUCATION

| Chair | Children’s Expectancy/Value Beliefs and Parental Valuing as Predictors of Worry in Math and Reading  
            Fanni Lauermann, University of Bonn, Germany; Jacquelyne S. Eccles, University of California – Irvine, United States; Reinhard Pekrun, Ludwig-Maximilians-Universität (LMU), Germany |
| Organisers | No Interest in Pure Maths? Students’ Interest in Problems With and Without a Connection to Reality  
            Johanna Rellensmann, University of Münster, Germany; Stanislaw Schukajlow, University of Münster, Germany |
| Discussant | Level, strength, and facet-specific self-efficacy in mathematics test performance  
            Karin Street, University of Oxford, United Kingdom; Lars-Erik Malmberg, University of Oxford, United Kingdom; Gabriel Stylianides, University of Oxford, Cyprus |
| | Students’ Engagement Profiles in Mathematics According to Learning Environment Dimensions  
            Helen Watt, Monash University, Australia; Colin Carmichael, Charles Sturt University, Australia; Rosemary Callingham, University of Tasmania, Australia |
SYMPOSIUM: META-ANALYSES IN EDUCATIONAL RESEARCH: ADVANCES AND CHALLENGES

Chair
Michael Schneider, University of Trier, Germany

Discussant
Lennart Schalk, ETH Zurich, Switzerland

What Predicts Mathematical Competence? A Meta-analysis on Numerical Magnitude Processing
Bert De Smedt, KU Leuven - University of Leuven, Belgium; Michael Schneider, University of Trier, Germany

Self-Explanation Promotes Mathematics Learning: A Meta-Analysis and Its Implications for Education
Bethany Rittle-Johnson, Vanderbilt University, United States; Abbey Loehr, Vanderbilt University, United States

Supporting Domain Learning and Collaboration Skills with CSCL Scripts: A Meta-Analysis
Freydis Vogel, Technical University of Munich (TUM), Germany; Ingo Kollar, University of Augsburg, Germany; Christof Wecker, Ludwig-Maximilians-Universität (LMU), Germany; Frank Fischer, Ludwig-Maximilians-Universität (LMU), Germany

A Multilevel Meta-Analysis of the Links between Creative Potential and Academic Achievement
Maciej Karwowski, Academy of Special Education, Poland; Aleksandra Gajda, Maria Grzegorzewska University, Poland; Ronald A. Beghetto, University of Connecticut, United States

SYMPOSIUM: EXPLORING THE CLASSROOM AS A CONTEXT FOR STUDENT REGULATION

Chair
David Whitebread, University of Cambridge, United Kingdom

Organisers
Kristiina Kurki, University of Oulu, Finland; Hanna Jarvenoja, University of Oulu, Finland; Deborah Pino-Pasternak, Murdoch University, Australia

Discussant
Nancy Perry, University of British Columbia, Canada

Associations between teacher-student relationships and young children’s self-regulated learning
Deborah Pino-Pasternak, Murdoch University, Australia; Anabela Malipique, Murdoch University, Australia / University of Lisbon, Portugal, Australia; Debora Valcan, Murdoch University, Australia

Exploring regulatory interactions of young children and teachers in challenging day-care situations
Kristiina Kurki, University of Oulu, Finland; Sanna Järvelä, University of Oulu, Finland

The social context of the primary classroom: Implications for children’s emotion regulation
Matthew Somerville, University of Cambridge, United Kingdom; David Whitebread, University of Cambridge, United Kingdom

Self-regulation development as culturally afforded by teachers’ socio-motivational talk
Pablo Torres, University of Cambridge, United Kingdom; David Whitebread, University of Cambridge, United Kingdom; Ros McLellan, Cambridge University, United Kingdom

ANNOTATIONS:
The presentation by Matt Somerville (The Social Context of the Primary Classroom: Implications for Children’s Emotion Regulation) is cancelled.

SATURDAY, 2 SEPTEMBER 2017
SYMPOSIUM: YOU SEE? IMPROVING INSTRUCTION BY VISUALIZING EYE MOVEMENTS

Chair
Tamara Van Gog, Utrecht University, Netherlands
Discussant
Lucia Mason, University of Padova, Italy

Gaze Guidance in Number-line Tasks
Thomas Gallagher-Mitchell, Liverpool Hope University, United Kingdom; Damien Litchfield, Edge Hill University, United Kingdom; Victoria Simms, Ulster University, United Kingdom

Effectiveness of Eye Movement Modeling Examples: The Role of Instructional Ambiguity
Tim van Marlen, Utrecht University, Netherlands; Margot van Wermeskerken, Utrecht University, Netherlands; Halszka Maria Jarodzka, Open University of the Netherlands, Netherlands; Tamara Van Gog, Utrecht University, Netherlands

Using Eye Movement Modeling Examples to support Learning with Multiple Representations
Marie-Christin Krebs, Leibniz-Institut für Wissensmedien, Germany; Anne Schueler, Leibniz-Institut für Wissensmedien, Germany; Katharina Scheiter, Leibniz-Institut für Wissensmedien, Germany

Eye See What You Are Doing: Inferring Task Performance from Eye Movement Data
Margot van Wermeskerken, Utrecht University, Netherlands; Damien Litchfield, Edge Hill University, United Kingdom; Tamara Van Gog, Utrecht University, Netherlands

SYMPOSIUM: MODELING KEY FACTORS OF STUDENTS’ WRITING PERFORMANCE

Chair
Teresa Limpo, University of Porto, Portugal
Organiser
Gert Rijlaarsdam, University of Amsterdam, Netherlands
Discussant
Vince Connelly, Oxford Brookes University, United Kingdom

Modelling the transcription-writing link: The mediating role of planning and translating
Teresa Limpo, University of Porto, Portugal; Rui Alexandra Alves, University of Porto, Portugal; Vince Connelly, Oxford Brookes University, United Kingdom

Student Perceptions of Efficacy and of Being Taught in Writing
Gavin Brown, University of Auckland, New Zealand; Judy M. Parr, University of Auckland, New Zealand

Implicit theories about writing of initial teacher training program students and professors
Constanza Errázuriz, Pontificia Universidad Católica de Chile, Chile

Cognitive and motivational key factors of late primary students’ writing performance
Fien De Smedt, Ghent University, Belgium; Emmelien Merchie, Ghent University, Belgium; Mariska Barendse, Ghent University, Belgium; Yves Rosseel, Ghent University, Belgium; Jessie De Naeghel, Ghent University, Belgium; Hilde Van Keer, Ghent University, Belgium

ANNOTATIONS:
THE PRESENTATION BY CONSTANZA ERRÁZURIZ (IMPLICIT THEORIES ABOUT WRITING OF INITIAL TEACHER TRAINING PROGRAM STUDENTS AND PROFESSORS) IS CANCELLED.
### Session Q: 22
**Time:** 10:30-12:00  
**Location:** Main Building E - E301

**SYMPOSIUM: STIMULATING AND SUSTAINING INTEREST: THE PROFITS AND PITFALLS OF TECHNOLOGY IN EDUCATION**

**Chair**  
K. Ann Renninger, Swarthmore College, United States

**Organisers**  
Luke K. Fryer, The University of Hong Kong, Hong Kong; Niels Dohn, Aarhus University, Denmark

**Discussant**  
Jason Chen, College of William and Mary, United States

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<thead>
<tr>
<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td>Opportunities for Exploratory Learning Online: Good for Interest (but Constrained by Utility Value)</td>
<td>Carol Sansone, University of Utah, United States; Tamra Fraughton, University of Utah, United States</td>
</tr>
<tr>
<td>Students’ interest in Scratch coding</td>
<td>Niels Dohn, Aarhus University, Denmark</td>
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<tr>
<td>Interest development across a Massive Open Online Course (MOOC)</td>
<td>Jason Lodge, The University of Melbourne, Australia; Paula De Barba, The University of Melbourne, Australia; Mary Ainley, University of Melbourne, Australia; Gregor Kennedy, University of Melbourne, Australia</td>
</tr>
<tr>
<td>Stimulating and sustaining interest: An experimental comparison of AI and Human task partners</td>
<td>Luke K. Fryer, The University of Hong Kong, Hong Kong; Mary Ainley, University of Melbourne, Australia; Andrew Thompson, Kyushu Sangyo University, Japan; Aaron Gibson, Kyushu Sangyo University, Japan; Linda Sherlock, Kyushu Sangyo University, Japan</td>
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### Session Q: 23
**Time:** 10:30-12:00  
**Location:** Pinni A - Paavo Koli

**SYMPOSIUM: PARTICIPATION AND AGENCY IN INSTRUCTIONAL SETTINGS: PERSPECTIVES OF DIAGNOSED CHILDREN**

**Chair**  
Michèle Grossen, University of Lausanne, Switzerland

**Discussant**  
Peter David Renshaw, The University of Queensland, Australia

<table>
<thead>
<tr>
<th>Title</th>
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<tbody>
<tr>
<td>One teacher – one child: Agency of the diagnosed child in a learning context</td>
<td>Eva Hjorne, University of Gothenburg, Sweden; Roger Säljö, University of Gothenburg, Sweden</td>
</tr>
<tr>
<td>Classroom participation and Identity Formations in a Special Support Classroom</td>
<td>Ann-Carita Evaldsson, Uppsala University, Sweden; Johanna Svahn, Uppsala University, Sweden</td>
</tr>
<tr>
<td>The ADHD category and family narrative on the child’s adverse school trajectory</td>
<td>Juho Honkasilta, University of Helsinki, Finland; Tanja Vehkakoski, University of Jyväskylä, Finland</td>
</tr>
<tr>
<td>ADHD as lived Experience in School Contexts: Exploring Instruction and Participation</td>
<td>Thyge Tegmejer, University of Southern Denmark, Denmark</td>
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</tbody>
</table>
### SYMPOSIUM: ENGAGEMENT FROM INFANTS TO SECONDARY SCHOOL: THE EFFECT OF RELATIONSHIP WITH TEACHERS AND PEERS

**Chair**
Marja-Kristiina Lerkkanen, University of Jyväskylä, Finland

**Discussant**
Lars-Erik Malmberg, University of Oxford, United Kingdom

**Infant engagement in childcare centers: Associations with teacher-child relationship quality**
Joana Cadima, University of Porto, Portugal; Ana Isabel Mota e Costa Pinto, University of Porto - Portugal, Portugal; Silvia de Barros, Politécnico do Porto, Portugal; Vera Coelho, University of Porto, Faculty of Psychology and Educational Sciences, Portugal; Donna Bryant, University of North Carolina at Chapel Hill, United States; Manuela Pessanha, Instituto Politécnico do Porto, Escola Superior de Educação, Portugal; Carla Peixoto, Polytechnic Institute of Porto, Portugal

**Teacher-Student Relationships and Achievement: A Meta-Analysis on the Mediating Role of Engagement**
Debora Roorda, University of Amsterdam, Netherlands; Suzanne Jak, Research Institute of Child Development and Education, University of Amsterdam, Netherlands; Marjolein Zee, University of Amsterdam, Netherlands; Frans Oort, Research Institute of Child Development and Education, University of Amsterdam, Netherlands; Helma Koomen, Research Institute of Child Development and Education, University of Amsterdam, Netherlands

**Quality of Teacher-student Interaction Contributes to Students’ Situational Engagement**
Sanni Pöysä, University of Jyväskylä, Finland; Kati Vasalampi, University of Jyväskylä, Finland; Joona Muotka, University of Jyväskylä, Finland; Marja-Kristiina Lerkkanen, University of Jyväskylä, Finland; Anna-Maija Poikkeus, University of Jyväskylä, Finland; Jari-Erik Nurmi, University of Jyväskylä, Finland

**Peer Selection and Influence in Adolescents’ School Engagement Trajectories**
Maaike Engels, KU Leuven, Belgium; Mariola C. Gremmen, University of Groningen, Department of Sociology, Netherlands; Jan Dijkstra, University of Groningen, Netherlands; Karen Phalet, KU Leuven, Department of Social and Cultural Psychology, Belgium; Karine Verschueren, KU Leuven, Belgium

### SINGLE PAPER: HIGHER EDUCATION AND INSTRUCTION

**Chair**
Idit Katz, Ben-Gurion University of the Negev, Israel

**Curricular space: Defining it, studying it, and assessing its impact on learning**
Maribel Blasco, Copenhagen Business School, Denmark; Emmanuel Manalo, Kyoto University, Japan

**Students’ engagement with digital microscopy: Pedagogical implications in distance learning**
Christothea Herodotou, Open University, United Kingdom; Maria Aristeidou, The Open University, United Kingdom; Simon Kelley, The Open University, United Kingdom; Eileen Scanlon, OU, United Kingdom

**Peer observation as a faculty professional development strategy: a research review**
Luis Tinoco, University of Lisbon, Portugal; Ernesto López Gómez, Universidad Nacional de Educación a Distancia (UNED), Spain

**Effects of different kinds of teaching methods in higher education—a longitudinal multimethod study**
Elisabeth Fischer, University of Kassel, Germany; Martin Haenze, University of Kassel, Germany
### SINGLE PAPER: TEACHING AND TEACHER EDUCATION - B

| Chair | Developing Student Teachers’ Pedagogical Content Knowledge and Agentic Identities Through Reflection  
Andrea Geitsou, University of Central Florida, United States  
Pre-University Teachers’ Knowledge, Beliefs and Practices Regarding University Preparation  
Els van Rooij, University of Groningen, Netherlands; Ellen Jansen, University of Groningen, Netherlands  
Pre-service teachers as designers? Unravelling decision making in advertising literacy education.  
Britt Adams, Ghent University, Belgium; Tammy Schellens, Ghent University, Belgium; Martin Valcke, Ghent University, Belgium  
Preservice teachers’ use of representations and visual-spatial abilities in problem solving  
Beyza Olgun, Middle East Technical University, Turkey; Engin Ader, Bogazici University, Turkey |
|-------|-----------------------------------------------------------------------------------------------------------------------|

### SINGLE PAPER: MOTIVATION AND EMOTION - C

| Chair | Does passion matter in education? Benefits and promoters  
Zuleica Ruiz Alfonso, University of Las Palmas de Gran Canaria, Spain; Jaime Leon, University of Las Palmas de Gran Canaria, Spain  
Measuring pupils’ attitudes towards socio-scientific issues.  
Juliette Walma van der Molen, University of Twente, Netherlands; Kim Evers, University of Twente, Netherlands  
Evolution of pre-service teachers’ motivational/affective profiles during a science learning unit  
Deborah Pino-Pasternak, Murdoch University, Australia; Simone Volet, Murdoch University, Australia  
Children’s beliefs about causes of success and failure at school Adapting the Causal Dimension Scale  
Laurent Brun, Université Grenoble Alpes, France; Benoit Dompnier, Institut des Sciences Sociales et Pédagogiques, Switzerland; Pascal Pansu, Université Grenoble Alpes, France |
|-------|-----------------------------------------------------------------------------------------------------------------------|
**SINGLE PAPER: TEACHING AND TEACHER EDUCATION**

**Chair**
Haim Eshach, Ben-Gurion University of the Negev, Israel

**How Pre-service Teachers Internalize the Link between Research Literacy and Pedagogy**
Mary Gutman, Efrata College, Israel; Lynne Genser, Efrata College of Education, Israel

**Prototypical educational settings from special education teachers in inclusive classes**
Jeannette Wick, University of Zurich, Switzerland

**Relations between mathematics teachers' professional knowledge and their lesson planning skills**
Stefan Ufer, Ludwig-Maximilians-Universität (LMU), Germany; Sabine Hammer, Technical University of Munich, TUM School of Education, Germany

**Preservice teachers' beliefs about high-stakes testing: Implications for policy and practice**
Sharon Nichols, University of Texas at San Antonio, United States

**ANNOTATIONS:**
THE PRESENTATION BY JEANNETTE WICK (PROTOTYPICAL EDUCATIONAL SETTINGS FROM SPECIAL EDUCATION TEACHERS IN INCLUSIVE CLASSES) IS CANCELLED.

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**SINGLE PAPER: SPECIAL EDUCATIONAL NEEDS - B**

**Chair**
Crista Weise, Autonomous University of Barcelona, Spain

**A character strength intervention in four inclusive Finnish classrooms**
Lotta Uusitalo-Malmivaara, University of Helsinki, Finland; Kaisa Vuorinen, University of Helsinki, Finland

**Examining the social outcomes of students with autism spectrum disorder in ‘inclusive schools’**
Christoforos Mamas, University of California, San Diego, United States; Shana Cohen, University of California, San Diego, United States; Gabrielle Jones, University of California, San Diego, United States

**Mathematics Intervention for Low Achieving Middle School Students: Reversing the Trend**
Shirley Yates, Tattahilla Lutheran College, Australia; Michelle Coop, Tattahilla Lutheran College, Australia

**The detection of plot structures and their relation to formal requirements**
Mathias Mejeh, University of Zurich, Switzerland

**ANNOTATIONS:**
THE PRESENTATION BY CHRISTOFOROS MAMAS (EXAMINING THE SOCIAL OUTCOMES OF STUDENTS WITH AUTISM SPECTRUM DISORDER IN ‘INCLUSIVE SCHOOLS’) IS CANCELLED.
# SINGLE PAPER: METACOGNITION - C

**Chair**  
Julia Kosinar, University of Applied Sciences and Arts Northwestern Switzerland, Switzerland

**Development of a doctoral student well being questionnaire**  
Jill Scevak, University of Newcastle, Australia

**How modeling and feedback impact self-regulation during a laparoscopic knot tying simulation task**  
Michael Dempsey, Boston University, United States; Douglas Kauffman, Boston University, United States

**Which students review their failures effectively? : The quality of "Lesson Induction"**.  
Satomi Shiba, University of Tokyo, Japan

**Socially shared regulation of learning: Relation with engagement, exploratory talk and performance**  
Valeska Grau, Pontificia Universidad Católica de Chile, Chile; Amaya Lorca, Pontificia Universidad Católica de Chile, Chile; Carolina Araya, Pontificia Universidad Católica de Chile, Chile

**ANNOTATIONS:**  
JULIA KOSINAR WILL CHAIR SESSION D: 5 AND IS REPLACED BY VESA KORHONEN. THE PRESENTATION BY MICHAEL DEMPSEY (HOW MODELING AND FEEDBACK IMPACT SELF-REGULATION DURING A LAPAROSCOPIC KNOT TYING SIMULATION TASK) IS CANCELLED.

# SINGLE PAPER: COMPREHENSION OF TEXT AND GRAPHICS - H

**Chair**  
Pablo Pirnay-Dummer, Germany

**The Interplay between Verbal and Visual Cueing**  
Manuela Glaser, Leibniz-Institut für Wissensmedien, Germany; Stephan Schwan, Leibniz-Institut für Wissensmedien, Germany

**Pathways to integration – contrasting a text-centered vs. a multiple-representations perspective**  
Ulrich Ludewig, University of Tübingen, Germany; Katharina Scheiter, Leibniz-Institut für Wissensmedien (IWM), Germany

**The influence of text coherence and inference making on solving mathematical word problems**  
Sabine Stephany, University of Cologne, Germany

**Performance and Perception Across Multiple Text Task Conditions**  
Alexandra List, Ball State University, United States
### Session R: 8

**Time:** 13:00-14:30  
**Location:** Pinni B - B4116

**SINGLE PAPER: METACOGNITION AND SELF-REGULATION**

<table>
<thead>
<tr>
<th>Chair</th>
<th>Resolving scientific controversies to promote epistemic change: Testing an intervention concept</th>
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<tbody>
<tr>
<td>Valentina Caruso, Swiss Federal Institute for Vocational Education and Training, Switzerland</td>
<td>Tom Rosman, Leibniz Institute for Psychology Information, Germany; Anne-Kathrin Mayer, ZPID - Leibniz Institute for Psychology Information, Germany</td>
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</tbody>
</table>

| Measuring Collaboration Challenges and We-I Dimension using a Collaborative Assessment Tool |
| Aishah Bakhtiar, University of Victoria, Canada; Allyson Hadwin, University of Victoria, Canada; Todd Millford, University of Victoria, Canada; Rebecca Edwards, University of Victoria, Canada |

| Motivation, SRL and learner behaviour in MOOCs |
| Renee Jansen, Utrecht University, Netherlands; Anouschka van Leeuwen, Utrecht University, Netherlands; Jeroen Janssen, Utrecht University, Netherlands; Liesbeth Kester, Utrecht University, Netherlands |

| Capturing SRL in upper primary school children: A data triangulation approach |
| Sofie Heirweg, Ghent University, Belgium; Mona De Smul, University of Ghent, Belgium; Geert Devos, Ghent University, Belgium; Hilde Van Keer, Ghent University, Belgium |

**ANNOTATIONS:**  
**THIS SESSION IS CHAIRMED BY LADISLAV SALMERO. VALENTINA CARUSO WILL CHAIR SESSION J: 21.**

### Session R: 9

**Time:** 13:00-14:30  
**Location:** Main Building A - A4

**SINGLE PAPER: SCHOOL AND TEACHER EFFECTIVENESS**

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<tr>
<th>Chair</th>
<th>School Leadership and Intercultural Understading</th>
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<tr>
<td>Jonathan Groff, France</td>
<td>Julianne Moss, Deakin University, Australia; Joanne O'Mara, Deakin University, Australia; Trevor McCandless, Deakin University, Australia</td>
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| Teacher Commitment to Poor Students: Self-interest and Ethic of Service in the Face of Adversity |
| Miguel Ordenes, University of California at Berkeley, United States |

| Psychometric properties of a Swedish instrument measuring pedagogical leadership – a Rasch analysis |
| Lisa Hellström, Malmö University, Sweden |

| Learning is like...what? Metaphors of Learning in Germany, China, USA and France |
| Elisabeth Wegner, University of Freiburg, Germany; Matthias Nückles, University of Freiburg, Germany |

**ANNOTATIONS:**  
**THE PRESENTATION BY LISA HELLESTRÖM (PSYCHOMETRIC PROPERTIES OF A SWEDISH INSTRUMENT MEASURING PEDAGOGICAL LEADERSHIP – A RASCH ANALYSIS) IS MOVED TO SESSION J: 29.**
### Session R: 10  
**Time:** 13:00-14:30  
**Location:** Virta - 109  

#### SINGLE PAPER: ASSESSMENT METHODS AND TOOLS - B

<table>
<thead>
<tr>
<th>Chair</th>
<th>The Quality of Feedback: Instructional effectiveness captured in video recorded classrooms</th>
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<tr>
<td>Jennifer Lambrecht, University of Potsdam, Germany</td>
<td>Lisbeth M Brevik, University of Oslo, Norway; Kirsti Klette, University of Oslo, Norway; Marte Blikaat-Balas, University of Oslo, Norway</td>
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<tr>
<th>Chair</th>
<th>Pre-service teachers analyse classroom situations: Assessing a key aspect of professional competence</th>
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<tr>
<td>Marita Friesen, Ludwigsburg University of Education, Germany; Sebastian Kuntze, Ludwigsburg University of Education, Germany</td>
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<tr>
<th>Chair</th>
<th>A developmental progression of self-regulated learning</th>
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<tbody>
<tr>
<td>Narelle English, Melbourne Graduate School of Education, Australia; Susan-Marie Harding, The University of Melbourne, Australia; Nives Nibali, Melbourne Graduate School of Education, Australia; Monjurul Alom, The University of Melbourne, Australia; Lorraine Graham, University of Melbourne, Australia; Patrick Griffin, University of Melbourne, Australia</td>
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<tr>
<th>Chair</th>
<th>How consistent are male and female variances in reading and mathematics?</th>
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<tr>
<td>Sue Stothard, Durham University, United Kingdom; Helen Gray, Durham University, United Kingdom; Peter Tymms, Durham University, United Kingdom; Andrew Lyth, Durham University, United Kingdom; Lee Copping, Durham University, United Kingdom</td>
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### Session R: 11  
**Time:** 13:00-14:30  
**Location:** Virta - 114  

#### SINGLE PAPER: LEARNING AND INSTRUCTION WITH COMPUTERS AND INSTRUCTIONAL DESIGN

<table>
<thead>
<tr>
<th>Chair</th>
<th>A Motivational Perspective on the Effects of Alternating Example Study and Problem Solving</th>
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<tr>
<td>Tibor Vidákovich, University of Szeged, Hungary</td>
<td>Milou van Harsel, Avans University of Applied Sciences / Utrecht University, Netherlands; Vincent Hoogerheide, Utrecht University, Netherlands; Peter Verkoeijen, Avans University of Applied Sciences / Erasmus University Rotterdam, Netherlands; Tamara Van Gog, Utrecht University, Netherlands</td>
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<tr>
<th>Chair</th>
<th>A longitudinal study on 38 learning designs within and between disciplines</th>
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<tr>
<td></td>
<td>Quan Nguyen, Open University, United Kingdom; Bart Rients, Open University, United Kingdom; Lisette Toetenel, The Open University, United Kingdom, United Kingdom</td>
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<tr>
<th>Chair</th>
<th>Introductory Computational Thinking through Scratch Programming: A K-12 Classroom Perspective</th>
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<td>Janne Fagerlund, University of Jyväskylä, Finland</td>
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<th>Chair</th>
<th>Motivational changes of distance learning students – a study over the course of one semester</th>
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<td>Nadja Müller, University of Ulm, Germany; Rebecca Pientka, University of Ulm, Germany; Tina Seufert, University of Ulm, Germany</td>
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*SATURDAY, 2 SEPTEMBER 2017*
### Session R: 12
**Time:** 13:00-14:30  
**Location:** Main Building A - A2B

#### SINGLE PAPER: LEARNING AND INSTRUCTION WITH COMPUTERS - D

**Chair**  
Erica de Vries, Université Grenoble Alpes, France

**Investigating the role of self-regulated learning in students’ approaches to open-ended online tasks**  
Sue Bennett, University of Wollongong, Australia; Lori Lockyer, University of Technology Sydney, Australia; Gregor Kennedy, University of Melbourne, Australia; Barney Daigarno, Charles Sturt University, Australia

**How collaboration scripts influence contribution quality in Wiki-based learning environments**  
Sven Heimbuch, University of Duisburg-Essen, Germany; Lisa Ollesch, University of Duisburg-Essen, Germany; Daniel Bodemer, University of Duisburg-Essen, Germany

**PILL-VR Simulation Learning Environment for Teaching Medication Administration to Nursing Students**  
Ilana Dubovi, University of Haifa, Israel; Sharona T. Levy, University of Haifa, Faculty of Education, Israel; Efrat Dagan, University of Haifa, Israel

**Multimodal, interactive, gameful e-learning concepts for the foreign language classroom**  
Laura Pihkala-Posti, University of Tampere, Finland

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**ANNOTATIONS:**

THE PRESENTATION BY SVEN HEIMBUCH (HOW COLLABORATION SCRIPTS INFLUENCE CONTRIBUTION QUALITY IN WIKI-BASED LEARNING ENVIRONMENTS) IS CANCELLED.

THE PRESENTATION BY ILANA DUBOVI (PILL-VR SIMULATION LEARNING ENVIRONMENT FOR TEACHING MEDICATION ADMINISTRATION TO NURSING STUDENTS) IS CANCELLED.

### Session R: 13
**Time:** 13:00-14:30  
**Location:** Pinni B - B4117

#### SINGLE PAPER: ARTS AND MUSIC EDUCATION

**Chair**  
Bernhard Ertl, Germany

**Sight-reading by cellists: The role of positional knowledge and tonal strategies**  
Zyxbian Wolfs, Open University of the Netherlands, Netherlands; Els Boshuizen, Open University of the Netherlands, Netherlands; Johan van Strien, Open University of the Netherlands, Netherlands

**Expert music educators as promoters of group-level regulation**  
Tarja-Riitta Hurme, University of Turku, Finland; Marjaana Puurtinen, University of Turku, Finland; Hans Gruber, University of Regensburg, Germany

**How guitarists perceive support for expertise development from different ‘persons in the shadow’**  
Manuel Laengler, University of Regensburg, Germany; Markus Nivala, University of Gothenburg, Sweden; Hans Gruber, University of Regensburg, Germany

**Crossing educational and cultural boundaries in improvisational expertise development**  
Iwan Wopereis, Open University of the Netherlands, Netherlands; Els Boshuizen, Open University of the Netherlands, Netherlands; Saskia Brand-Gruwel, Open University of the Netherlands, Netherlands
### SINGLE PAPER: HIGHER EDUCATION AND ACHIEVEMENT

**Chair**
Hans Gruber, University of Regensburg, Germany

**Cognitive, affective, and behavioral engagement in small-scale teaching**
Jasperina Brouwer, University of Groningen, Netherlands; Elen Jansen, University of Groningen, Netherlands; Adriaan Hofman, University of Groningen, Netherlands; Andreas Flache, University of Groningen, Netherlands

**Constructing instrument assessing students approaches to learning: Considering context**
Madeleine Kapinka Mutatayi, KU Leuven, Belgium; Pierre Mukendi wa Mpyi, Université de Kinshasa, Congo, the Democratic Republic of the; Jan Elen, KULeuven/Faculty of Psychology and Educational Sciences, Belgium

**Course performance feedback as a source of university students’ sense of self-efficacy**
Jeffrey Smith, University of Otago, New Zealand; Nicola Beatson, University of Otago, New Zealand; David Berg, University of Otago, New Zealand

**Physical and virtual spaces in higher education**
Marie Leijon, Malmö University, Sweden; Björn Lundgren, Malmö University, Sweden

**ANNOTATIONS:**
The presentation by Marie Leijon (Physical and Virtual Spaces in Higher Education) will take place in Session B: 9 Single Paper: Assessment and Evaluation, Replacing Liesje Coertjens.
The presentation by Jeffrey Smith (Course Performance Feedback as a Source of University Students’ Sense of Self-Efficacy) is cancelled.

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### SINGLE PAPER: ONLINE MEASURES OF LEARNING PROCESSES - B

**Chair**
Mona Weinhuber, University of Freiburg, Germany

**Reading rhythms: Eye movements of expert musicians and novices-in-training**
Marjaana Puurtinen, University of Turku, Finland; Erkki Huovinen, Royal College of Music in Stockholm, Sweden; Anna-Kasa Ylitalo, University of Jyväskylä, Finland

**A Gaze-Enabled System for Tracking the Reading Progress of Second Year Children in a Primary School**
Kari-Jouko Räihä, University of Tampere, Finland; Howell Istance, University of Tampere, Finland; Oleg Spakov, University of Tampere, Finland; Harri Siirtola, University of Tampere, Finland

**Current State of Learning Management System Log Data Based Learning Analytics**
Agüel Hernandez-Garcia, Technical University of Madrid, Spain; Emiliano Acquila-Natale, Universidad Politécnica de Madrid, Spain; Julian Chaparro-Pelaez, Universidad Politecnica de Madrid, Spain

**Conceptual Ground and Findings Overview of the Polyphonic Analysis of Knowledge Building Dialogs**
Nicolae Nistor, Ludwig-Maximilians-Universität (LMU), Germany; Stefan Trausan-Matu, "Polytechnica" University Bucharest, Romania; Mihai Dascalu, "Politehnica" University Bucharest, Romania; Philippe Dessus, Université Grenoble Alpes, France
### Session R: 16  
**Time:** 13:00-14:30  
**Location:** Pinni B - B3111

**SINGLE PAPER: SOCIAL INTERACTION IN LEARNING AND INSTRUCTION - E**

| Chair | Adolescents’ school engagement: Selection and influence effects of friendship and digital networks  
Shupin Li, University of Turku, Finland; Tuire Palonen, University of Turku, Department of Teacher Education, Finland; Noona Kiuru, University of Jyväskylä, Finland; Katarina Salmela-Aro, Helsinki Collegium for Advanced Studies, Finland; Kai Hakkarainen, University of Helsinki, Finland  
**Production and Perception of Classroom Disturbances**  
Boris Eckstein, University of Zurich, Switzerland; Urs W. Grob, University of Zurich, Switzerland; Kurt Reusser, University of Zurich, Switzerland  
**Interaction quality and differential associations on children's social and emotional skills in Norway**  
Thomas Moser, University College of Southeast Norway, Norway; Ingrid Midteide Lekken, University College of Southeast Norway, Norway; Martine Broekhuizen, Utrecht University, Netherlands; Elisabeth Bjørnstad, University College of Oslo and Akershus, Norway  
**Embodied dialogues, creative intersubjectivities**  
Eva Vass, Western Sydney University, Australia; Gabriella Deszpot, Liszt Ferenc Academy of Music, Hungary |

**ANNOTATIONS:**  
THE PRESENTATION BY BORIS ECKSTEIN (PRODUCTION AND PERCEPTION OF CLASSROOM DISTURBANCES) IS MOVED TO SESSION D: 30. THE PRESENTATION BY EVA VASS (EMBODIED DIALOGUES, CREATIVE INTERSUBJECTIVITIES) IS MOVED TO SESSION B: 12.

### Session R: 17  
**Time:** 13:00-14:30  
**Location:** Virta - 113

**SINGLE PAPER: LEARNING AND DEVELOPMENT IN EARLY CHILDHOOD - F**

| Chair | The effect of mind mapping on listening comprehension and vocabulary in early childhood education  
Chiel van der Veen, VU University Amsterdam, Netherlands; Monica Koster, VU University Amsterdam, Netherlands; Femke van der Wilt, VU Amsterdam, Netherlands; Claudia van Kriistum, Vrije Universiteit Amsterdam, Netherlands  
**Developments in teacher-child relationships and 2-6 year olds’ academic adjustment**  
Ineke van der veen, Kohnstamm Institute, University of Amsterdam, Netherlands; Annemiek Veen, University of Amsterdam, Netherlands  
**Quality in kindergarten and children’s academic outcomes in kindergarten and grade 1 and 3**  
Annemiek Veen, University of Amsterdam, Netherlands; Ineke van der veen, Kohnstamm Institute, University of Amsterdam, Netherlands; Merlijn Karssen, Kohnstamm Institute, University of Amsterdam, Netherlands  
**Influence of Child Characteristics on Teacher Self-Efficacy in Early Childhood Special Education**  
Brook Sawyer, Lehigh University, United States; Ann O’Connell, The Ohio State University, United States; Nivedita Bhaktha, The Ohio State University, United States; Laura Justice, The Ohio State University, United States; Julie Santoro, Lehigh University, United States |

**ANNOTATIONS:**  
THE PRESENTATION BY CHIEL VAN DER VEEEN (THE EFFECT OF MIND MAPPING ON LISTENING COMPREHENSION AND VOCABULARY IN EARLY CHILDHOOD EDUCATION) IS MOVED TO SESSION O: 13 AND REPLACED BY CRISTINA NANU (SFON AT 5 YEARS OF AGE AS A PREDICTOR OF MATHEMATICAL SKILLS AND KNOWLEDGE AT GRADE 5).
### SYMPOSIUM: INTEGRATING DOMAINS OF TEACHER PROFESSIONAL KNOWLEDGE IN TEACHER EDUCATION

**Chair**  
Jan Elen, KU LEUVEN, Belgium

**Discussant**  
Jan van Driel, The University of Melbourne, Australia

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does Pedagogical Knowledge Foster the Acquisition of Pedagogical</td>
<td>Steffen Troebst, Leibniz Institute for Science and Mathematics Education (IPN), Germany; Judith</td>
</tr>
<tr>
<td>Content Knowledge?</td>
<td>Pollmeier, Kiel University, Educational Science, Germany; Thilo Kleickmann, Kiel University,</td>
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<td>Educational Science, Germany</td>
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<td>Examining the Effects of Different Learning Environments on the</td>
<td>Marie Evens, KU Leuven, Belgium; Charlotte Larmuseau, KU Leuven, Belgium; Jan Elen, KU</td>
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<tr>
<td>Development of Teacher Knowledge</td>
<td>Leuven, Belgium; Fien Depapepe, KU Leuven, Belgium</td>
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<tr>
<td>Supporting Pre-service Teachers’ Integration of Technology, Pedagogy,</td>
<td>Noortje Janssen, University of Twente, Netherlands; Ard Lazonder, Radboud University,</td>
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<td>and Content in Lesson Planning</td>
<td>Netherlands</td>
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<td>Supporting Knowledge Integration by Journal Writing in Teacher</td>
<td>Martina Graichen, University of Freiburg, Germany; Matthias Nückles, University of Freiburg,</td>
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<td>Education</td>
<td>Germany</td>
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### SYMPOSIUM: UNDERSTANDING THE LEARNING MIND THROUGH THE BODY: PHYSIOLOGY, EMOTIONS AND MOTIVATION IN CLASSROOMS

**Chair**  
Lars-Erik Malmberg, University of Oxford, United Kingdom

**Discussant**  
Susanne Lajoie, McGill University, Canada

<table>
<thead>
<tr>
<th>Title</th>
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<tbody>
<tr>
<td>Test anxiety and physiological arousal: A systematic review</td>
<td>Anna-Lena Roos, University of Konstanz, Germany; Thomas Goetz, Department of Empirical</td>
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<td>Educational Research, Germany; Madeleine Bieg, University of Konstanz, Germany; Amanda</td>
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<td>Jarrell, McGill University, Canada; Maike Krannich, University of Konstanz, Germany</td>
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<td>Teachers’ physiology and emotions in the classroom</td>
<td>Monika Donker, Utrecht University, Netherlands; Tim Mainhard, Utrecht University, Netherlands;</td>
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<td>Tamara Van Gog, Utrecht University, Netherlands</td>
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<td>Adolescents’ emotions and psychophysiological reactions in</td>
<td>Noona Kiuru, University of Jyväskylä, Finland; Anni Lehikoinen, University of Jyväskylä, Finland;</td>
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<td>achievement situations</td>
<td>Enna Vähäasäyrinki, University of Jyväskylä, Finland; Jarno Mikkonen, University of Jyväskylä, Finland;</td>
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<td>Finland; Jukka Kaartinen, University of Jyväskylä, Finland; Timo Ahonen, University of Jyväskylä, Finland;</td>
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<td>A motivated look into students’ affective response to an authentic</td>
<td>Idalis Villanueva, Utah State University, United States; Jenefer Husman, University of Oregon,</td>
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<td>examination experiences</td>
<td>United States; Katherine Cheng, Arizona State University, United States</td>
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**Session R: 18**  
**Time:** 13:00-14:30  
**Location:** Main Building C - C6

**Session R: 19**  
**Time:** 13:00-14:30  
**Location:** Main Building A - A32
## SYMPOSIUM: TEACHER-STUDENT RELATIONSHIPS IN DIFFERENT PHASES OF SCHOOLING

**Chair**
Helen Watt, Monash University, Australia

**Organiser**
Rebecca Lazarides, University of Potsdam, Germany

**Discussant**
Kerstin Helker, RWTH Aachen University, Germany

**Teacher-class relationship – a new perspective on the relationship between teachers and students**
Julia Hözl, Ludwig-Maximilians-Universität (LMU), Germany; Anne Christiane Frenzel, University of Munich, Germany

**Inhibited students’ poorer math skills: the role of teachers’ and students’ ability judgements**
Jaana Vihjaranta, University of Eastern Finland, Finland; Kaisa Aunola, University of Jyväskylä, Finland; Sari Mullola, University of Helsinki, Finland; Jari-Erik Nurmi, University of Jyväskylä, Finland

**Manifestations of empathy: Teacher-student relationships among Australian Primary Teachers**
Paul Swan, Monash University, Australia; Philip Riley, Australian Catholic University, Australia

**Teacher-student relationships from the perspective of secondary students**
Gloria Gratacos, C.U. Villanueva, Spain; Ernesto López Gómez, Universidad Nacional de Educación a Distancia (UNED), Spain; Guiomar Nocito, C.U. Villanueva, Spain; Santiago SASTRE LLORENTE, C.U. Villanueva, Spain

## SYMPOSIUM: MULTIPLE PERSPECTIVES ON PROFESSIONAL DEVELOPMENT IN ECEC

**Chair**
Lotte Henrichs, Utrecht University, Netherlands

**Discussant**
Miriam Leuchter, University of Koblenz - Landau, Germany

**Improving ECEC Quality in Chile: The Impact Results of A Model of Professional Development**
Diana Leyva, Davidson College, United States; Andrea Rolla, Harvard University, Chile; Ernesto Treviño, Pontificia Universidad Católica de Chile, Chile; Mary Catherine Arbour, Harvard University, United States; Marcela Marzolo, Fundación Educacional Oportunidad, Chile; Clara Barata, University of Lisbon, Portugal

**The Growth of Pedagogical Awareness of Teachers Attending a Professional Development Programme**
Anna-Maja Poikkeus, University of Jyväskylä, Finland; Jenni Salminen, University of Jyväskylä, Finland; Marja-Kristina Lerkkonen, University of Jyväskylä, Finland; Kati Vasalampi, University of Jyväskylä, Finland

**Description and analysis of successful PD in pre-k and k programs from 5 different countries**
Diana Leyva, Davidson College, United States; Jimena Cosso, New York University, United States; Hiro Yoshikawa, New York University, United States

**Web-based professional development in early childhood settings: Benefits and limitations explored**
Lotte Henrichs, Utrecht University, Netherlands; Willemijn Schot, Utrecht University, Netherlands
### SYMPOSIUM: IMPROVING CUES USED BY STUDENTS AND TEACHERS TO ENHANCE MONITORING AND LEARNING

**Chair**  
Anique de Bruin, Maastricht University, Netherlands  
Discussant  
Mariette van Loon, University of Bern, Switzerland  

**Are Drawings More Effective than Summaries to Support Students’ Monitoring and Control Processes?**  
Katrin Schleinschok, Leibniz-Institut für Wissensmedien, Germany; Alexander Eitel, University of Freiburg, Germany; Katharina Scheiter, Leibniz-Institut für Wissensmedien, Germany  

**Using an Interpersonal Approach to Predict Achievement by Self- and Peer Ratings of Competence**  
Thomas Lösch, University of Bamberg, Germany; Oliver Lüdtke, Leibniz Institute for Mathematics and Science Education, Germany; Alexander Robitzsch, Leibniz Institute for Mathematics and Science Education, Germany; Augustin Ketava, University of Tübingen, Germany; Benjamin Nagengast, Eberhard Karls Universität Tübingen, Germany; Ulrich Trautwein, University of Tübingen, Germany  

**Teachers’ Judgments of Students’ Text Comprehension: Can Keywords and Summaries Improve Accuracy?**  
Jan Engelen, Tilburg University, Netherlands; Gino Camp, Welten Institute, Netherlands; Janneke van de Pol, Utrecht University, Netherlands; Anique de Bruin, Maastricht University, Netherlands  

**Comparing Teacher and Student Perspectives on the Interplay of Student Characteristics**  
Maralena Pielmeier, Technical University of Munich (TUM), Germany; Sina Huber, Technische Universität München (TUM), Germany; Tina Seidel, Technische Universität München (TUM), Germany  

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### SYMPOSIUM: MULTILINGUALISM AND EDUCATION

**Chair**  
Dominique Rauch, German Institute for International Educational Research (DIPF), Germany  
Discussant  
Svenja Vieluf, German Institute for International Educational Research (DIPF), Germany  

**Linguistic inequalities in education: Explaining differences between countries**  
Orhan Agirdag, KU Leuven, Belgium  

**Implementing linguistic diversity in preschool education in Germany.**  
Jens Kratzmann, Catholic University of Eichstätt-Ingolstadt, Germany; Samuel Jahreiß, Catholic University of Eichstätt-Ingolstadt, Germany; Maren Frank, Catholic University of Eichstätt-Ingolstadt, Germany; Steffi Sachse, PH Heidelberg, Germany  

**Facilitating German Reading in Bilingual Primary School Children Through Peer-Learning**  
Dominque Rauch, German Institute for International Educational Research (DIPF), Germany; Jasmin Decristan, Goethe-University Frankfurt; IDEA-Research Center, Germany; Valentina Reitenbach, German Institute for International Educational Research, Germany; Martin Schastak, German Institute of International Educational Research (DIPF); IDEA-Research Center, Germany  

**Enhancing Learning of Multilingual Children from a Linguistic Minority**  
Pascale Engel de Abreu, University of Luxembourg, Luxembourg; Rute Tomás, University of Luxembourg, Luxembourg; ariana Ferreira Loff, University of Luxembourg, Luxembourg; Carolina Nikaedo, University of Luxembourg, Luxembourg; Rute Cordeiro, University of Luxembourg, Luxembourg; Romain Martin, University of Luxembourg, Luxembourg
### INVITED SYMPOSIUM: MOTIVATION, AFFECT, AND BODY IN INSTRUCTIONAL DESIGN: CURRENT THEORETICAL APPROACHES

<table>
<thead>
<tr>
<th>Chair</th>
<th>Emerging Embodied Technologies and Virtual Reality for Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Björn de Koning, Erasmus University</td>
<td>Mina Johnson-Glenberg, Arizona State University, United States</td>
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<td>Organisers</td>
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<tr>
<td>Björn de Koning, Erasmus University</td>
<td>Affective-Motivational Mediation in Learning from Complex Digital Simulations: Effects of Topic</td>
</tr>
<tr>
<td>Rotterdam, Netherlands; Jean-Michel Boucheix, University of Dijon, LEAD-CNRS, France</td>
<td>Cyril Brom, Charles University, Czech Republic; Filip Dětchárenko, Faculty of Mathematics and Physics, Charles University in Prague, Czech Republic; Nikola Frolová, Faculty of Mathematics and Physics, Charles University in Prague, Czech Republic; Tereza Stárková, Faculty of Mathematics and Physics, Charles University in Prague, Czech Republic; Edita Bromová, Faculty of Mathematics and Physics, Charles University in Prague, Czech Republic; Sidney D’Mello, University of Notre Dame, Department of Psychology &amp; Department of Computer Science, United States</td>
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<td>Discussant</td>
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<tr>
<td>Jean-Michel Boucheix, University of Dijon, LEAD-CNRS, France</td>
<td>The Importance of Student Variables in Supporting Self-regulated Learning in Online Learning</td>
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<td>Jacqueline Wong, Erasmus University Rotterdam, Netherlands; Martine Baars, Erasmus University Rotterdam, Netherlands; Dan Davis, Delft University of Technology, Netherlands; Tim van der Zee, Leiden University, Netherlands; Geert-Jan Houben, Delft University of Technology, Netherlands; Fred Paas, Erasmus University Rotterdam/University of Wollongong, Netherlands</td>
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<tr>
<td></td>
<td>INTERACT: A Process Model of Interactivity integrating behavioral, affective and cognitive aspects</td>
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<td>Helmut M. Niegemann, Saarland University, Germany; Steffi Heidig(Domagk), TU Dresden, Germany; Ruth Schwartz, Quinnipiac University, United States; Jan L. Plass, New York University, United States</td>
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### INVITED SYMPOSIUM: SCIENCE WITH AND FOR SOCIETIES IN HORIZON 2020: WHAT ARE THE IMPLICATIONS FOR WRITING RESEARCH?

<table>
<thead>
<tr>
<th>Chair</th>
<th>Writing research with and for schools Perspectives from the Norm project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eva Lindgren, Umeå University, Sweden</td>
<td>Synnave Mate, Norwegian University of Science and Technology, Norway; Randi Solheim, NTNU, Faculty of Social and Educational Sciences, Norway</td>
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<td>Organisers</td>
<td>The grammar-writing interplay: Exploring teachers’ concepts for educational change</td>
</tr>
<tr>
<td>Montserrat Castelló, Ramon Llull University, Spain; Eva Lindgren, Umeå University, Sweden</td>
<td>Xavier Fontich, Autonomous University of Barcelona, Spain</td>
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<td>Discussant</td>
<td>Supporting elementary teachers in the implementation of Tekster, a strategy-focused writing program</td>
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<tr>
<td>Debra Myhill, University of Exeter, United Kingdom</td>
<td>Renske Bouwer, University of Antwerp, Belgium; Monica Koster, Free University, Amsterdam, Netherlands</td>
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<td></td>
<td>Educational science approaches to solving problems of practice in writing in New Zealand</td>
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<td>Judy M. Parr, University of Auckland, New Zealand; Rebecca Jesson, University of Auckland, New Zealand</td>
</tr>
</tbody>
</table>
### INVITED SYMPOSIUM: DIFFERENT APPROACHES TO IMPROVE THE HOME LEARNING ENVIRONMENT AND CHILD OUTCOMES

**Chair**
Simone Lehrl, University of Bamberg, Germany

**Organiser**
Yvonne Anders, Freie Universität Berlin, Germany

**Discussant**
Pamela Sammons, University of Oxford, United Kingdom

**Playgroups for inclusion: experimental impacts on caregiving environment and child development**
Vanessa Russo, University Institute of Lisbon (ISCTE - IUL), Portugal; M. Clara Barata, University of Coimbra, Portugal; Catarina Leitao, University of Coimbra, Portugal; Bruno de Sousa, University of Coimbra, Portugal; Joana Alexandre, University Institute of Lisbon (ISCTE-IUL), Portugal

**EasyPeasy app: the effect of parental engagement on school readiness skills of 3-6 year old children**
Kathy Sylva, University of Oxford, United Kingdom; Fiona Jelley, University of Oxford, United Kingdom

**The associations between maternal trust towards preschool teacher and child outcomes**
Marja-Kristiina Lerkkanen, University of Jyväskylä, Finland; Eija Pakarinen, University of Jyväskylä, Finland

**Successful ways of preschools to involve parents in their children’s learning**
Yvonne Anders, Freie Universität Berlin, Germany; Manja Flöter, PädQUIS gGmbH, Germany; Nadine Wieduwilt, Free University Berlin, Germany; Hans Guenther Rossbach, University of Bamberg, Germany

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**Annotations:**
This Symposium is moved to Session P: 24 in Room: PINNI B - B4113.

### INVITED SYMPOSIUM: A RISE IN MIGRATION: DIALOGUE, LANGUAGE AND INTERCULTURAL COMMUNICATION CHALLENGES

**Chair**
Sarah Crafter, Open University, United Kingdom

**Organiser**
Sarah Crafter, Open University, United Kingdom

**Discussant**
Charles Max, University of Luxembourg, Luxembourg

**Dive IN – Diversity as Normality**
Ylva Lindberg, Jönköping University, Sweden; Elisabet Sandblom, Jönköping University, Sweden

**Mobilization of nomenclature related to language and diversity in learning and instruction**
Sangeeta Bagga-Gupta, Jönköping University, Sweden

**Intercultural Digital Narratives**
Giuseppe Ritella, University of Helsinki, Finland; Alessio Surian, Università degli Studi di Padova, Italy

**Learning to be in the new environment – a pilot project for youngsters in Luxembourg 2017**
Gudrun Ziegler, multi-LEARN Institute, Luxembourg; Jin Choi, multi-LEARN Institute, Luxembourg; Phillipe Blanca, multi-LEARN Institute, Luxembourg
### Session S: 1

**Time:** 14:45-16:15  
**Location:** Main Building D - D14

**SINGLE PAPER: RESEARCHER EDUCATION AND CAREERS**

<table>
<thead>
<tr>
<th>Chair</th>
<th>Topic</th>
</tr>
</thead>
</table>
| Nadine Spörer, U. of Potsdam, Germany | Rethinking researcher competitive identity at the crossroads of education, business and economy  
Irina Lokhtina, U. of Central Lancashire, Cyprus |

**Why are doctoral studies initiated? Comparison of Finnish, UK and Spanish PhD students’ interests**  
Jouni Peltonen, U. of Oulu, Finland; Kirsi Pyhältö, U. of Oulu / U. of Helsinki, Finland; Lynn McAlpine, U. of Oxford, UK; Montserrat Castelló, Ramon Llull U. of Spain

**Early researchers’ identity positions based on significant events in research**  
Eva Lises, Ramon Llull U. of Spain; Antoni Badia, Universitat Oberta de Catalunya, Spain; Carles Monereo, UAB Universitat Autònoma de Barcelona, Spain

**ANNOTATIONS:**  
THIS SESSION IS CHAIRMED BY CHARLOTTE RUBACH, REPLACING NADINE SPÖRER.

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### Session S: 2

**Time:** 14:45-16:15  
**Location:** Virta - 120

**SINGLE PAPER: MOTIVATION, EMOTION AND AFFECT**

<table>
<thead>
<tr>
<th>Chair</th>
<th>Topic</th>
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</table>
| Engin Ader, B. University, Turkey | The role of epistemic emotions during daily life problem solving  
Sandra Becker, Ludwig-Maximilians-Universität (LMU), Germany; Elisabeth Vogt, Ludwig-Maximilians-Universität (LMU), Germany; Julia Haager, University of Regensburg, Germany |

**Functions of Emotions for Mathematical Thinking**  
Sandra Becker, Ludwig-Maximilians-Universität (LMU), Germany; Reinhard Pekrun, Ludwig-Maximilians-Universität (LMU), Germany; Stefan Ufer, Ludwig-Maximilians-Universität (LMU), Germany

**Students’ perceptions about emotion regulation and a group awareness tool in collaborative learning**  
Arttu Mykkänen, U. of Oulu, Finland; Hanna Jarvenoja, U. of Oulu, Finland; Marika Koivuniemi, U. of Oulu, Finland; Sanna Järvelä, U. of Oulu, Finland

**Curiosity and Well Being in Emerging Adulthood**  
Thomas Reio, Florida International University, United States; Joanne Sanders-Reio, Florida International University, United States; Mia Heikkila, Florida International University, United States
**SINGLE PAPER: COGNITIVE SKILLS AND AT-RISK LEARNERS**

<table>
<thead>
<tr>
<th>Chair</th>
<th>Using secondary data to analyse school improvement</th>
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<tbody>
<tr>
<td></td>
<td>Daniel Muijs, University of Southampton, United Kingdom</td>
</tr>
<tr>
<td>Stability of Reading Difficulties</td>
<td>Maria Pasyridou, University of Jyväskylä, Finland; Minna Torppa, University of Jyväskylä, Finland; Åsko Tolvanen, University of Jyväskylä, Finland; Anna-Maija Poikkeus, University of Jyväskylä, Finland; Marja-Kristiina Lenkkonen, University of Jyväskylä, Finland; Jari-Erik Nurmi, University of Jyväskylä, Finland</td>
</tr>
<tr>
<td>The influence of first-year study yield on degree completion in Flemish higher education</td>
<td>Sebastiano Cinccinatto, Vrije Universiteit Brussel, Belgium; Els Consuegra, Vrije Universiteit Brussel (VUB), Belgium; Nadine Engels, Vrije Universiteit Brussel (VUB), Belgium</td>
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<tr>
<td>Capacity limitations, orthographic coding, writing fluency and dyslexia</td>
<td>Lorna Bourke, Liverpool Hope University, United Kingdom; Simon Davies, Liverpool Hope University, United Kingdom</td>
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**ANNOTATIONS:**

THIS SESSION IS CHAired BY SARI YRJÄNÄinen, REPLACING RIikka Hirvonen.

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**SINGLE PAPER: COMPUTER-ASSISTED AND ONLINE LEARNING**

<table>
<thead>
<tr>
<th>Chair</th>
<th>Learning the Concept of Function With Computer-Generated Dynamic Visualizations</th>
</tr>
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<tbody>
<tr>
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<td>Tobias Rolfe, University of Koblenz-Landau, Germany; Jürgen Roth, University of Koblenz-Landau, Germany; Wolfgang Schnottz, University of Koblenz-Landau, Germany</td>
</tr>
<tr>
<td>The effect of the acceptance and actual use of a virtual learning environment on learning outcomes.</td>
<td>Charlotte Larmuseume, KU Leuven, Belgium; Marie Evens, KU Leuven (BE), Belgium; Fien Depaepe, KU Leuven, Belgium; Jan Elen, KU Leuven (BE), Belgium; Piet Desmet, KU Leuven KULAK, Belgium</td>
</tr>
<tr>
<td>Dispositional Learning Analytics: a linking pin between LA and educational theory</td>
<td>Dirk Tempelaar, Maastricht University, Netherlands; Quan Nguyen, Open University, United Kingdom; Bart Rienties, Open University, United Kingdom</td>
</tr>
<tr>
<td>Using interaction patterns in a visual problem-solving task to detect learners’ confusion</td>
<td>Amael Arguel, Macquarie University, Australia; Kevin Chai, Curtin University, Australia; Mariya Pachman, Macquarie University, Australia; Lori Lockyer, University of Technology Sydney, Australia</td>
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</tbody>
</table>
### Session S: 5  
**Time:** 14:45-16:15  
**Location:** Main Building A - A2B

#### SINGLE PAPER: LEARNING AND DEVELOPMENT IN EARLY CHILDHOOD - B

**Chair**  
Liisa Ilomäki, University of Helsinki, Finland

**Keeping the spirit up: The impact of parent and teacher emotional support on working memory**  
Dieter Baeyens, KU Leuven, Belgium; Loren Vandenbroucke, KULeuven, Belgium; Jantine Spilt, KU Leuven, Belgium; Karine Verschueren, KU Leuven, Belgium

**“Sometimes the Internet doesn’t know everything”: Children’s Epistemic Reasoning in Science Inquiry**  
X. Christine Wang, State University of New York at Buffalo, United States

**Balancing blocks: Young children’s understanding of statics**  
Anke Maria Weber, University of Koblenz-Landau, Germany; Miriam Leuchter, University of Koblenz - Landau, Germany; Ina Plöger, WWU Münster, Germany

**The Role of Teaching Practices in Reading Skills Development from Grade 1 to 3**  
Xin Tang, University of Jyväskylä, Finland

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**ANNOTATIONS:**  
THE PRESENTATION BY X. CHRISTINE WANG (“SOMETIMES THE INTERNET DOESN’T KNOW EVERYTHING”: CHILDREN’S EPSITEMIC REASONING IN SCIENCE INQUIRY) IS CANCELLED.

### Session S: 6  
**Time:** 14:45-16:15  
**Location:** Main Building C - C8

#### SINGLE PAPER: TEACHING AND TEACHER EDUCATION - F

**Chair**  
Olia Tsivitanidou, University of Cyprus, Cyprus

**Motivational orientations in teacher education**  
Daniela Martinek, University of Salzburg, Austria; Julia Maria Keller, University of Salzburg, Austria; Ulrike Kipman, Pädagogische Hochschule Salzburg, Austria; Matteo Carmignola, University of Salzburg, Austria

**Teaching quality: An online intervention**  
Jaime Leon, University of Las Palmas de Gran Canaria, Spain; Elena Medina-Garrido, University of Las Palmas de Gran Canaria, Spain; Juan L. Núñez, UNIVERSITY OF LAS PALMAS DE GRAN CANARIA - FACULTAD DE CIENCIAS DE LA EDUCACIÓN, Spain; Zuleica Ruiz Alfonso, University of Las Palmas de Gran Canaria, Spain; Miriam Ortega-Viera, University of Las Palmas de Gran Canaria, Spain

**Teacher or team? The role of individual and team resources in collaborative professional development**  
Katrien Vangrieken, KU Leuven, Belgium; Filip Dochy, KU Leuven, Belgium; Eva Kyndt, KU Leuven, Belgium

**If a student thinks "I’m not a math person", do teachers notice?**  
Helene Rieche, University of Freiburg, Germany; Timo Leuders, University of Education Freiburg, Germany; Georg Brunner, University of Education Freiburg, Germany; Alexander Renkl, University of Freiburg, Germany

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*SATURDAY, 2 SEPTEMBER 2017*
### Session S: 7  
**Time: 14:45-16:15  
Location: Virta - 109**

**SINGLE PAPER: HIGHER EDUCATION - I**

**Chair**  
Eleni Kyza, Cyprus University of Technology, Cyprus

**Understanding functionality in Higher Education. Metaresearch across disciplines in the 21st century**  
Giulia Messina Dahlberg, University of Skövde, Sweden; Sangeeta Bagga-Gupta, Jönköping University, Sweden

**Career Competences at the End of Higher Education: The Role of Structural and Personal Factors**  
Ike Grosemans, KU Leuven, Belgium; Liesje Coertjens, Université catholique de Louvain (UCL), Belgium; Eva Kyndt, KU Leuven, Belgium

**Taking a digital leap? University students' experiences of electronic examinations**  
Lisa Myrky, University of Helsinki, Finland; Anni Rytökäinen, University of Helsinki, Finland

**Investigating Networks within the field of Higher Education Institutions**  
Tobias Jenert, University of St.Gallen, Switzerland; Chloë Meredith, KU LEUVEN, Belgium; Luci Commers, University of St.Gallen, Switzerland

**ANNOTATIONS:**  
THE PRESENTATION BY TOBIAS JENERT (UNDERSTANDING FUNCTIONALITY IN HIGHER EDUCATION. META RESEARCH ACROSS DISCIPLINES IN THE 21ST CENTURY) IS CANCELLED.

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### Session S: 8  
**Time: 14:45-16:15  
Location: Linna - K103**

**SINGLE PAPER: COMPREHENSION OF TEXT AND GRAPHICS - F**

**Chair**  
Julia Mendzheritskaya, Goethe-Universität Frankfurt, Germany

**Verbal Instruction Effectively Reduces the Consistency Effect in Mathematical Word Problem Solving**  
Björn de Koning, Erasmus University Rotterdam, Netherlands; Anton Boonen, Vrije Universiteit Amsterdam & Kenniscentrum Windesheim Zwolle, Netherlands; Menno van der Schoot, Vrije Universiteit Amsterdam, Netherlands

**Chunking in Chess: Expertise Differences in Eye Movements and Recall Performance**  
Markus Nivala, University of Gothenburg, Sweden; Helen Jossberger, University of Regensburg, Germany; Dagmar Festner, University of Paderborn, Germany; Hans Gruber, University of Regensburg, Germany; Christian Hartels, University of Paderborn, Germany

**Learners’ Epistemic Understandings of the Nature of Visual Representations**  
Sāriţ Barzilai, University of Haifa, Israel; Billie Eliam, University of Haifa, Israel

**Second graders’ literacy attitudes: are they related to reading performance or parental involvement?**  
Ruth Villalon, University of Cantabria, Spain; Ma. Angeles Melero Zabal, Universidad de Cantabria, Spain; Belen Izquierdo-Magaldi, University of Cantabria, Spain

**ANNOTATIONS:**  
THE PRESENTATION BY BJÖRN DE KONING (VERBAL INSTRUCTION EFFECTIVELY REDUCES THE CONSISTENCY EFFECT IN MATHEMATICAL WORD PROBLEM SOLVING) IS CANCELLED.
### SINGLE PAPER: SCIENCE EDUCATION

**Chair**
Antonia Scholkmann, University of Hamburg, Germany

**Revealing Learners’ Paths During Progression: A Conceptual Change Assessments Method**
François Lombard, University of Geneva, Switzerland; Marie Merminod, Université de Genève, Switzerland; Vincent Widmer, FPSE, Université de Genève, Switzerland; Daniel K. Schneider, University of Geneva, Switzerland

**Evidence-based model evaluation: Students’ interpretation of multiple pieces of evidence**
Hebbah El-Moslimany, Rutgers University, Graduate School of Education, United States; Na'ama Av-Shalom, Rutgers University Graduate School of Education, United States; Clark Chinn, Rutgers University, United States; Ravit Duncan, Rutgers University, United States

**The development of scientific thinking from kindergarten to elementary school**
Susanne Koerber, University of Education Freiburg, Germany; Christopher Osterhaus, University of Munich, Germany

**Students’ epistemic beliefs in Sweden and Germany: Correlations with classroom characteristics**
Andrea Bernholt, Leibniz Institute for Science and Mathematics Education (IPN), Germany; Mikael Winberg, Umeå University, Sweden; Maria Lindfors, Umeå University, Sweden

**ANNOTATIONS:**
THE PRESENTATION BY ANDREA BERNHOLT (STUDENTS’ EPISTEMIC BELIEFS IN SWEDEN AND GERMANY: CORRELATIONS WITH CLASSROOM CHARACTERISTICS) IS PRESENTED AS A POSTER IN SESSION E/1.

THE PRESENTATION BY SUSANNE KOERBER (THE DEVELOPMENT OF SCIENTIFIC THINKING FROM KINDERGARTEN TO ELEMENTARY SCHOOL) IS MOVED TO SESSION K: 18.

### SINGLE PAPER: INSTRUCTIONAL DESIGN - E

**Chair**
Carmela Aprea, Friedrich Schiller University Jena, Germany

**Providing Written or Oral Explanations? Modality Effects of Explaining on Students’ Learning**
Andreas Lachner, University of Tübingen, Germany; Matthias Nückles, University of Freiburg, Germany

**Learning by tracing: A cognitive load approach**
Paul Ginns, University of Sydney, Australia; Amy Smith, The University of Sydney, Australia; Natasha Marsh, The University of Sydney, Australia

**The Role of Gender and Spatial Ability in Enhancing Static Pictures with Embodied Cognition**
Paul Ayres, University of New South Wales, Australia; Nadine Marcus, The University of New South Wales, Australia; Francilia Gomes, The University of New South Wales, Australia

**Investigating the Impact of Time of Instruction on Learning in an Out-of-School Lab**
Valentina Nachtigall, Ruhr University Bochum, Germany; Nikol Rummel, Ruhr University Bochum, Institute of Educational Research, Germany; Katja Serova, Ruhr University Bochum, Germany

**ANNOTATIONS:**
THE PRESENTATION BY PAUL AYRES (THE ROLE OF GENDER AND SPATIAL ABILITY IN ENHANCING STATIC PICTURES WITH EMBODIED COGNITION) IS MOVED TO SESSION K: 4. THIS SESSION WILL BE CHAIRLED BY TIINA KUJALA, REPLACING CARMELA APREA. CARMELA APREA WILL CHAIR SESSION E/10.
## SINGLE PAPER: ASSESSMENT AND EVALUATION - C

<table>
<thead>
<tr>
<th>Chair</th>
<th>Continuous and Multidimensional Representation of a Child’s Social Status within Its Peer Group</th>
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<tbody>
<tr>
<td></td>
<td>Pawel R. Kulawiak, University of Potsdam, Germany; Juergen Wilbert, University of Potsdam, Germany</td>
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<thead>
<tr>
<th>Chair</th>
<th>The Assessment of Collaborative Problem Solving Skills – Associations With the Big Five</th>
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<tbody>
<tr>
<td></td>
<td>Maida Mustafić, University of Luxembourg, Luxembourg; Katharina Herborn, University of Luxembourg, Luxembourg; Nick Schweitzer, University of Luxembourg, Luxembourg; Samuel Greiff, University of Luxembourg, Luxembourg</td>
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</tbody>
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<thead>
<tr>
<th>Chair</th>
<th>Promoting Pedagogical Effectiveness Through Self-Assessment and Peer-Instruction: an Evaluation</th>
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<tbody>
<tr>
<td></td>
<td>Fabio Riccardo Arico, University of East Anglia, United Kingdom; Eva Susanne Fritzschke, Department of Teacher Education, Germany</td>
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<thead>
<tr>
<th>Chair</th>
<th>Beyond means: Investigating classroom learning environments through consensus in student surveys</th>
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<tr>
<td></td>
<td>Jonathan Schweig, RAND Corporation, United States; Jose Felipe Martinez, University of California, Los Angeles, United States; Meredith Langi, University of California, Los Angeles, United States</td>
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**Annotations:**

This session is chaired by Marita Mäkinen, replacing Claude Mueller.

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## SINGLE PAPER: COMPREHENSION OF TEXT AND GRAPHICS - I

<table>
<thead>
<tr>
<th>Chair</th>
<th>Inside the clockwork – a closer look on students constitutional difficulties with word problems</th>
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<tbody>
<tr>
<td></td>
<td>Verena Dresen, Institute of Psychology, UMIT, Health &amp; Life Sciences University, Austria; Silvia Pixner, Institute of Psychology, UMIT, Health &amp; Life Sciences University, Austria; Erik Danay, Institute for Psychology, UMIT, Health &amp; Life Sciences University, Austria</td>
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<tr>
<th>Chair</th>
<th>Four reading ability tests as predictors of multimedia document comprehension</th>
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<tbody>
<tr>
<td></td>
<td>Juliette Desiron, University of Geneva, Switzerland; Mireille Bétrancourt, University of Geneva, Switzerland; Erica de Vries, Université Grenoble Alpes, France</td>
</tr>
</tbody>
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<tr>
<th>Chair</th>
<th>Young Students’ Reading of Partly Contradictory Texts: A Think-Aloud Study</th>
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<tr>
<td></td>
<td>Wenke Mork Rogne, Volda University College, Norway; Helge Strømsø, University of Oslo, Norway</td>
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<tr>
<th>Chair</th>
<th>Adjusting Task Difficulty to Control Learner’s Intrinsic Cognitive Load</th>
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<tbody>
<tr>
<td></td>
<td>Tina Seufert, University of Ulm, Germany; Melina Klepsch, Ulm University, Germany; Julia Westphal, University of Ulm, Germany</td>
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</tbody>
</table>
### Session S: 13  
**Time:** 14:45-16:15  
**Location:** Main Building A - A2A

#### SINGLE PAPER: WRITING, LITERACY AND LANGUAGE - B

| Chair | Fostering Personal and Social Insights in the Literature Classroom: A Review of Intervention Studies  
Marloes Schrijvers, University of Amsterdam, Netherlands  
Sanne Janssen, Universiteit van Amsterdam, Netherlands  
Olivia Fialho, Utrecht University, Netherlands; Gert Rijlaarsdam, University of Amsterdam, Netherlands  
Self-Efficacy for Metalinguistics and Its Relation to Writing Quality: Exploring the Translation Box  
Michael Dempsey, Boston University, United States  
Learning to write: a recursive process  
Klaske Elving, Utrecht University, Netherlands; Gert Rijlaarsdam, University of Amsterdam, Netherlands; Huub Van den Bergh, Universiteit Utrecht, Netherlands  
What opportunities do students have to engage in writing during their language arts lessons?  
Marte Blikstad-Balas, University of Oslo, Norway; Kirsti Klette, University of Oslo, Norway; Astrid Roe, University of Oslo, Faculty of Education, Norway |

**ANNOTATIONS:**  
THE PRESENTATION BY MICHAEL DEMPSEY (SELF-EFFICACY FOR METALINGUISTICS AND ITS RELATION TO WRITING QUALITY: EXPLORING THE TRANSLATION BOX) IS CANCELLED.

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### Session S: 14  
**Time:** 14:45-16:15  
**Location:** Main Building A - A05

#### SINGLE PAPER: SPECIAL EDUCATIONAL NEEDS AND TEACHER PROFESSIONAL DEVELOPMENT

| Chair | Student-specific teachers’ self-efficacy related to students’ special educational needs  
Susanne Schwab, University of Wuppertal, Germany  
Self-Efficacy beliefs as predictor to quit the teacher training?  
Petra Hecht, Pädagogische Hochschule Vorarlberg, Austria; Corinna Koschmieder, University of Graz, Austria; Georg Krammer, University of Teacher Education Styria, Austria  
The effect of class teachers’ behavior management self-efficacy on classroom behavioral climate  
Olli-Pekka Malinen, Niilo Mäki Institute, Finland; Hannu Savolainen, University of Joensuu, Finland; Vesa Näärhi, Niilo Mäki Institute, Finland  
Analysing challenges to improve support for students on the autism spectrum in inclusive schools  
Andreas Eckert, University of Applied Sciences of Special Needs Education, Switzerland; Carla Canonica, Interkantonale Hochschule für Heilpädagogik Zürich, Switzerland; Karolin Gruber, Ludwig-Maximilians-Universität (LMU) München, Germany; Reinhard Markowitz, Ludwig-Maximilians-Universität (LMU) München, Germany |

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*SATURDAY, 2 SEPTEMBER 2017*
### SINGLE PAPER: EARLY CHILDHOOD EDUCATION AND ACHIEVEMENT

**Chair**
Daniela Raccanello, University of Verona, Italy

- **Behavioral Self-Regulation and Academic Achievement in Young Children in France**
  Blandine Hubert, University of Nantes, France; Megan McClelland, Oregon State University, United States

- **The Influence of Executive Functioning on Academic Achievement among Elementary School Students**
  Fitim Uka, University of Freiburg, Germany; Antje von Suchodoletz, New York University Abu Dhabi, United Arab Emirates

- **Developmental Pathways to Reading and Math: the Role of Attentional and Behavioral Control**
  Dieuwer ten Braak, University of Stavanger, Norway; Tjis Kleemans, Radboud University Nijmegen, Netherlands; Ingunn Stokke, Stavanger University, Norway; Ludo Verhoveen, Radboud University Nijmegen, Netherlands; Eliane Segers, Radboud University Nijmegen / University of Twente, Netherlands

- **Executive Functions and Self-Control Contribute to Mathematics Performance in Elementary Students**
  Catherine Gunzenhauser, Leipzig University, Germany; Henrik Saalbach, University of Leipzig, Germany

### SINGLE PAPER: STEM AND EDUCATIONAL POLICY

**Chair**
Kristina Loderer, Ludwig-Maximilians-Universität (LMU), Germany

- **Disciplinary boundary crossing: Abolition, permeability and colonization in STEM education**
  David Clarke, The University of Melbourne, Australia

- **Considering epistemological junctions when designing for interdisciplinary learning**
  Richard Lehrer, Vanderbilt University, United States

- **Integrating research and design in interdisciplinary STEM education**
  Jan van Driel, The University of Melbourne, Australia; Tessa Vossen, Leiden University, Netherlands; Ineke Henze-Rietveld, Delft University of Technology, Netherlands; Marc De Vries, Delft University of Technology, Netherlands

- **The effectiveness of multiple GILB-MIXP STEM learning environments on students’ performance.**
  Marion Cruwels, KU Leuven, Belgium; Arnt Van Soom, KU LEUVEN, Belgium; Carla Schramme, KU LEUVEN, Belgium; Daan Moechars, KU LEUVEN, Belgium

**ANNOTATIONS:**
THE PRESENTATION BY MARION CRAUWELS (THE EFFECTIVENESS OF MULTIPLE GILB-MIXP STEM LEARNING ENVIRONMENTS ON STUDENTS’ PERFORMANCE.) IS MOVED TO SESSION D: 30.

THIS SESSION IS CHAIRED BY ANTTI SYVANEN, REPLACING KRISTINA LODERER.
## SINGLE PAPER: COGNITIVE DEVELOPMENT AND SKILLS

**Chair**  
Lenka Schnaubert, University of Duisburg-Essen, Germany

**Developmental changes in digit representations and their relation with arithmetic achievement**  
Bert Reynvoet, KU Leuven, Belgium; Helene Vos, KU LEUVEN, Belgium; Delphine Sasanguie, KU Leuven, Belgium

**The role of ordering abilities in early mathematical development and developmental dyscalculia**  
Kinga Morsanyi, Queen’s University Belfast, United Kingdom; Patrick O’Connor, Queen’s University, Belfast, United Kingdom; Bianca Van Bers, Queen’s University, Belfast, United Kingdom; Teresa McCormack, Queen’s University, Belfast, United Kingdom

**SNARC and MARC effects - insight from a large-scale online study**  
Krzysztof Cipora, University of Tübingen, Germany; Mojtaba Soltanlou, University of Tübingen, Germany; Ulf-Dietrich Reips, Universität Konstanz, Germany; Hans-Christoph Nuerk, University of Tübingen, Germany

**Numerical abilities of English and Chinese children**  
Ann Dowker, University of Oxford, United Kingdom; Anthony Li, Oxford University, United Kingdom

## SINGLE PAPER: ACHIEVEMENT

**Chair**  
Heidi Hyttinen, University of Helsinki, Finland

**Educational tracking in early adolescence: To what extent does intelligence prevail?**  
Elisabeth Stern, ETH Zurich, Switzerland; Sarah Isabelle Hofer, TU Munich School of Education, Germany; Esther Ziegler, ETH Zurich, Switzerland

**The sober reality of high school: somewhat engaged, ambivalent, and detached students**  
Laura Helle, University of Turku, Finland; Eero Laakkonen, University of Turku, Department of Teacher Education, Finland; Tiina Tuijula, University of Turku, Department of Education, Finland; Jan Vermunt, University of Cambridge, United Kingdom

**Personality and Domain-Specific Achievement at Upper Secondary School**  
Jennifer Meyer, Leibniz Institute for Science and Mathematics Education (IPN), Germany; Johanna Fleckenstein, Leibniz Institute for Science and Mathematics Education / University of Kiel, Germany; Michael Leucht, Leibniz Institute for Science and Mathematics Education (IPN), Germany; Olaf Koellner, Leibniz Institute for Science and Mathematics Education, Germany

**Is to be Gritty to be Conscientious? Relations on a Facet Level**  
Fabian T. C. Schmidt, Leibniz Institute for Science and Mathematics Education (IPN), Germany; Gabriel Nagy, IPN - Leibniz Institute for Science and Mathematics Education, Germany; Johanna Fleckenstein, Leibniz Institute for Science and Mathematics Education / University of Kiel, Germany; Jens Möller, University of Kiel, Germany; Jan Retelsdorf, University of Hamburg, Germany
### SINGLE PAPER: ASSESSMENT, METHODS AND TOOLS - B

<table>
<thead>
<tr>
<th>Chair</th>
<th>Assessment quality: an integrative literature review</th>
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<tbody>
<tr>
<td>Sharon Calor, University of Amsterdam, Netherlands</td>
<td>Desirée Joosten-ten Brinke, Open University of the Netherlands, Netherlands; Karin Gerritsen-van Leeuwenkamp, Open University of the Netherlands, Netherlands; Liesbeth Kester, Utrecht University, Netherlands</td>
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<tr>
<td></td>
<td>Formative use of test results: A user’s perspective</td>
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<td></td>
<td>Dorian Hopster-den Otter, University of Twente, Netherlands; Saskia Wools, Cito, Netherlands; Theo Egggen, Universiteit Twente, Netherlands; Bernard Veldkamp, University of Twente, Netherlands</td>
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<tr>
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<td>The effect of feedback on learning: a case study on the intended and the perceived curriculum</td>
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<td>Jorik G. Arts, Fontys University of Applied Sciences, Netherlands; Mieke Jaspers, Fontys University of applied sciences, Netherlands; Lianne Poel, Fontys University of Applied Sciences, Netherlands; Desirée Joosten-ten Brinke, Open University of the Netherlands, Netherlands</td>
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<tr>
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<td>Assessing learning gains</td>
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<td>Jekaterina Rogaten, Open University, United Kingdom; Denise Whitelock, Open University, United Kingdom; Bart Rientjes, Open University, United Kingdom</td>
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**ANNOTATIONS:**
THIS SESSION IS MOVED TO SESSION D: 29.

**IMPORTANT NOTICE:** THIS SESSION WILL TAKE PLACE IN ROOM MAIN BUILDING A - A05.

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### SINGLE PAPER: COGNITIVE SKILLS AND COMPREHENSION OF TEXT AND GRAPHICS

<table>
<thead>
<tr>
<th>Chair</th>
<th>PISA-Reading: gender gap and early prediction in Finland</th>
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<tbody>
<tr>
<td>Stijn Van Laer, KU LEUVEN, Belgium</td>
<td>Minna Torppa, University of Jyväskylä, Finland; Kenneth Eklund, University of Jyväskylä, Finland; Sari Suikkanen, University of Jyväskylä, Finland; Pekka Niemi, University of Turku, Finland; Timo Ahonen, University of Jyväskylä, Finland</td>
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<td>Mathematical modelling of cognitive processes in graph interpretation from visual scan-paths</td>
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<td>Enrique Garcia Moreno-Esteva, University of Helsinki, Finland; Sonia White, Queensland University of Technology, Australia; Joanne Wood, Queensland University of Technology (QUT), Australia; Alexander Black, Queensland University of Technology (QUT), Australia</td>
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<tr>
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<td>Designing Critical New-Media Literacy Education</td>
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<td></td>
<td>Elaine Jee, Ministry of Education Singapore, Singapore</td>
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<tr>
<td></td>
<td>Holists and serialists - differences in dealing with multiple representations</td>
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<td></td>
<td>Julia Westphal, University of Ulm, Germany; Tina Seufert, University of Ulm, Germany</td>
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</tbody>
</table>
# SINGLE PAPER: ASSESSMENT METHODS AND TOOLS AND PSYCHOMETRICS

| Chair | Adaptation of the Collaborative Knowledge Practices Questionnaire to upper secondary education  
Hanni Muukkonen, University of Oulu, Finland; Liisa Ilomäki, University of Helsinki, Finland; Minna Lakkala, University of Helsinki, Finland; Auli Toom, University of Helsinki, Finland  
Assessing teacher students' epistemological beliefs about texts in pedagogy with the SteB Inventory  
Inka Haehnlein, University of Passau, Germany; Jutta Mägdefrau, University of Passau, Germany  
Evaluating the Instructional Sensitivity of Test Items in Consideration of Student Characteristics  
Stephanie Musow, University of Teacher Education St.Gallen, Switzerland; Jan Hochweber, University of Teacher Education St. Gallen, Switzerland; Alexander Naumann, German Institute for International Educational Research (DIPF), Germany; Johannes Hartig, German Institute for International Educational Research (DIPF), Germany  
Investigating the Impacts of Characteristics of Science Contextualized Items on Student Performance  
Min Li, University of Washington, United States; Dongsheng Dong, University of Washington, United States; Maria Araceli Ruiz-Primo, Stanford University, United States; Jim Minstrell, Facet Innovations, United States |

**Annotations:**
The presentation by Min Li (Investigating the Impacts of Characteristics of Science Contextualized Items on Student Performance) is cancelled.
### SINGLE PAPER: ASSESSMENT AND HIGHER EDUCATION

**Chair**  
Minna Puustinen, INS HEA, France

**Type and timing of feedback in an online environment: relation and implications for learning**  
Teresa Guasch, Open University of Catalonia (UOC), Spain; Anna Espasa, Universitat Oberta de Catalunya, Spain; Rosa M Mayordomo, Open University of Catalonia (UOC), Spain; Montserrat Martinez Melo, Open University of Catalonia, Spain

**Simulated Conversations for Assessing Professional Conversation Competence**  
Johannes Bauer, University of Erfurt, Germany; Anne Wiesbeck, TUM School of Education, Germany; Martin Gartmeier, Technical University of Munich (TUM), Germany; Manfred Prenzel, Technical University of Munich (TUM), Germany

**Pros and cons of student evaluation of academic teaching: a synthesis of strengths and challenges**  
Liliana Silva, University of Bologna, Italy; Maria Lucia Giovannini, Alma Mater Studiorum Università di Bologna, Italy

**Sharing Learning Goals with Students: Capturing What Teacher Do Everyday**  
Maria Araceli Ruiz-Primo, Stanford University, United States; Heidi Kroog, Smarter Balanced, United States

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**ANNOTATIONS:**  
THIS SESSION WILL BE CHAILED BY ELINA KUUSISTO, REPLACING MINNA PUUSTINEN.

### SINGLE PAPER: ATTITUDES, BELIEFS AND SELF-EFFICACY

**Chair**  
Stephan Schwan, Leibniz-Institut für Wissensmedien, Germany

**Implicit Theory and Classroom Goal Structure in the Cognitive Appraisal of Self-efficacy Information**  
Mimi Bong, Korea University, Korea, Republic of; Hyun Seon Ahn, Brain and Motivation Research Institute (bMRI), Korea University, Korea, Republic of

**Sources of Mathematics and Science Self-Efficacy Among Adolescents in Rural Appalachia**  
Ellen Usher, University of Kentucky, United States; Caihong Li, University of Kentucky, United States; Calah Ford, University of Kentucky, United States; Brianna Weidner, University of Kentucky, United States

**Comorbidity of academic difficulties and sources of self-efficacy among primary school age children**  
Helena Viholainen, University of Jyväskylä, Finland; Tuija Aro, University of Jyväskylä, Finland; Tuire Koponen, University of Jyväskylä, Finland; Pirvi Peura, University of Jyväskylä, Finland; Riikka Sorvo, University of Jyväskylä, Finland; Elja Rääkkönen, University of Jyväskylä, Faculty of Education, Finland; Mikko Aro, University of Jyväskylä, Finland

**Self-regulatory efficacy beliefs and their sources of children with attention deficits**  
Mika Paananen, University of Jyväskylä, Finland; Tuija Aro, University of Jyväskylä, Finland; Helena Viholainen, University of Jyväskylä, Finland; Tuire Koponen, University of Jyväskylä, Finland; Jari Westerholm, Niilo Mäki Institute, Finland; Mikko Aro, University of Jyväskylä, Finland
**Session S: 24**  |  **Time: 14:45-16:15**  |  **Location: Main Building E - E221**
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**SINGLE PAPER: NEUROSCIENCE AND COGNITIVE DEVELOPMENT**

**Chair**
Regina Mulder, University of Regensburg, Germany

**Developmental trajectories of children’s symbolic skills and associated cognitive competencies**
Kiran Vanbinst, KU Leuven, Belgium; Eva Ceulemans, KU Leuven - University of Leuven, Belgium; Lien Peters, KU Leuven - University of Leuven, Belgium; Pol Ghesquière, KU Leuven - University of Leuven, Belgium; Bert De Smedt, KU Leuven - University of Leuven, Belgium

**Adjusting Skill Learning Protocols to Aid Learning in Developmental Disorders.**
Esther Adi-Japha, Bar-Ilan University, Israel

**Do rewards enhance learning? The effect of a reward prospect on information processing: An EEG study**
Sanne van der Ven, Utrecht University, Netherlands; Sven van Touw, Utrecht University, Netherlands; Anne van Hoogmoed, University of Groningen, Netherlands; Eva Janssen, Utrecht University, Netherlands; Paul Leseman, Utrecht University, Netherlands

**Beyond Arabic digits: Symbolic number processing with alphabetic characters**
Courtney Pollack, Vanderbilt University, United States

**ANNOTATIONS:**
THE PRESENTATION BY ESTHER ADI-JAPHA (ADJUSTING SKILL LEARNING PROTOCOLS TO AID LEARNING IN DEVELOPMENTAL DISORDERS) IS MOVED TO J: 31.

THE PRESENTATION BY SANNE VAN DER VEN (DO REWARDS ENHANCE LEARNING? THE EFFECT OF A REWARD PROSPECT ON INFORMATION PROCESSING: AN EEG STUDY) IS MOVED TO G:2.

THIS SESSION WILL BE CHAIRMED BY YIANNIS GEORGIOU, REPLACING REGINA MULDER.

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**Session S: 25**  |  **Time: 14:45-16:15**  |  **Location: Main Building A - A07**
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**SINGLE PAPER: SPECIAL EDUCATION**

**Chair**
Maren Luebecke, Zurich University of Applied Sciences, Switzerland

**Unemployment among individuals with learning disabilities: childhood predictors and adult outcomes**
Anna-Kajsa Eioranta, Niilo Määki Institute, Finland; Vesa Närhi, University of Jyväskylä, Finland; Timo Ahonen, University of Jyväskylä, Finland; Elisa Korhonen, Niilo Määki Institute, Finland; Tuja Aro, University of Jyväskylä, Finland

**Attitudes of students with learning disabilities to teacher assistance in learning and task solving**
Tibor Vidakovich, University of Szeged, Hungary; Erika Köböl, University of Szeged, Hungary

**Validating a math anxiety scale for adolescent students: A confirmatory factor analysis approach**
Johan Korhonen, Åbo Akademi University, Finland; Pekka Räsänen, Niilo Määki Institute, Finland; Karin Linnanmäki, Åbo Akademi University, Finland

**Practice and effects of inclusive education – Results from a Swiss national empirical study.**
Reto Luder, Zurich University of Teacher Education, Switzerland; Andre Kunz, Zurich University of Teacher Education, Switzerland
### Session S: 26  
**Time: 14:45-16:15  
Location: Pinni B - B1100**

**SINGLE PAPER: MOTIVATION AND ACHIEVEMENT - B**

**Chair**  
Ulrich Ludewig, University of Tübingen, Germany

1. **Longitudinal relations between school-related basic need support and academic self-efficacy**  
   Age Diseth, University of Bergen, Norway

2. **Individual and compositional effects of achievement goals, self-regulation and student achievement**  
   Melvin Chan, National Institute of Education, Singapore

3. **Promoting Long-term Interest with a Utility-Value Intervention**  
   Judith Harackiewicz, University of Wisconsin-Madison, United States; Cameron Hecht, University of Wisconsin-Madison, United States; Stacy Prihinski, University of Wisconsin-Madison, United States

4. **Correlates of students’ self-evaluation bias of competence according to their level of achievement**  
   Ludwine Jamain, Université Grenoble Alpes, France; Therese Bouffard, Université du Québec à Montréal, Canada; Pascal Pansu, Université Grenoble Alpes, France

### Session S: 27  
**Time: 14:45-16:15  
Location: Virta - 113**

**SINGLE PAPER: LIFELONG LEARNING**

**Chair**  
Beatriz Vargas Dorneles, Brazil

1. **Seeing the invisible: editing wikipedia for the public good**  
   Allison Littlejohn, Open University, United Kingdom; Nina Hood, University of Auckland, Faculty of Education, New Zealand; Martin Rehm, University of Duisburg-Essen, Germany; Bart Rienties, Open University, United Kingdom

2. **Entrepreneurial Competencies of Established Women Entrepreneurs in Germany and Ireland**  
   Kaethe Schneider, Friedrich Schiller University Jena, Germany

3. **Determinants of a corporate culture for lifelong competence development**  
   Bernd Gössl, University of Osnabrück, Germany

4. **Workplace learning motivation: pointing out the conceptual and measurement issues**  
   Nané Kochoian, Université catholique de Louvain (UCL), Belgium; Isabel Raemdonck, Université Catholique de Louvain, Belgium; Mariane Frenay, Université catholique de Louvain (UCL), Belgium

**ANNOTATIONS:**  
THIS SESSION IS MOVED TO J:31. THE PRESENTATION BY NANÉ KOCHOIAN (WORKPLACE LEARNING MOTIVATION: POINTING OUT THE CONCEPTUAL AND MEASUREMENT ISSUES) IS CANCELLED.
SYMPOSIUM: FACETS OF HETEROGENEITY AND THEIR IMPACT ON EMOTIONS IN THE CLASSROOM

Chair
Katarzyna Gogol, University of Konstanz, Germany

Discussant
Tim Mainhard, Utrecht University, Netherlands

Heterogeneity in Competence and Situational Interest of Students relates to Classroom Emotions
Eva Becker, University of Zurich, Switzerland; Melanie Keller, Leibniz Institute for Science and Mathematics Education at Kiel University, Germany; Madeleine Bieg, University of Konstanz, Germany; Fritz C. Staub, University of Zurich, Switzerland

Being over- or underchallenged: Effects on students’ career aspirations via self-concept and boredom
Meike Kranich, University of Konstanz, Germany; Thomas Goetz, Department of Empirical Educational Research, Germany; Anna-Lena Roos, University of Konstanz, Germany

The relationship between state math anxiety and math performance among sixth graders
Rikka Sorvo, University of Jyväskylä, Finland; Noona Kliuru, University of Jyväskylä, Finland; Tuire Koponen, University of Jyväskylä, Finland; Timo Ahonen, University of Jyväskylä, Finland; Helena Viholainen, University of Jyväskylä, Finland; Tuula Aro, University of Jyväskylä, Finland; Mikko Aro, University of Jyväskylä, Finland

Structural model and developmental dynamics of general and subject-specific academic anxieties
Katarzyna Gogol, University of Konstanz, Germany; Martin Brunner, University of Luxembourg, Germany; Franzis Preckel, University of Trier, Germany; Romain Martin, University of Luxembourg, Luxembourg