



EARLI 2023 PROGRAMME BOOK

EARLI 2023
The 20th Biennial EARLI Conference
for Research on Learning and Instruction
22 - 26 August 2023
Thessaloniki, Greece

EARLI.org/events/EARLI2023

PROGRAMME OVERVIEW

TUESDAY 22.08.23	WEDNESDAY 23.08.23	THURSDAY 24.08.23	FRIDAY 25.08.23	SATURDAY 26.08.23
08:00 – 09:30 Registrations (open all day)	08:00 – 09:30 Session D	08:00 – 09:30 Session H	08:00 – 09:30 Session L	08:00 – 09:30 Session Q
9:30 – 10:30 Opening Ceremony	09:45 – 11:15 Keynotes – PART 1	09:45 – 11:15 Keynotes – PART 2	09:45 – 11:15 Keynotes – PART 3	09:45 – 11:15 Session R
10:30 – 11:30 Policy Makers Session				
11:30 – 12:00 Coffee Break	11:15 – 11:45 Coffee Break	11:15 – 11:45 Coffee Break	11:15 – 11:45 Coffee Break	11:15 – 11:45 Coffee Break
12:15 – 13:45 Session A	12:00 – 13:30 Session E	12:00 – 13:30 Session I	12:00 – 13:30 Session M	12:00 – 13:30 Session S
13:45 – 14:45 Lunch	13:30 – 14:30 Lunch and Ancient Symposium for Early Career Researchers	13:30 – 14:30 Lunch and Lunch with Professors	13:30 – 14:30 Lunch	13:30 – 14:30 Lunch
15:00 – 16:30 Session B	14:45 – 16:15 Session F	14:45 – 16:15 Session J	14:45 – 16:15 Session N	14:45 – 16:15 Session T
16:30 – 17:00 Coffee Break	16:15 – 16:45 Coffee Break	16:15 – 16:45 Coffee Break	16:15 – 16:45 Coffee Break	16:30 – 18:00 Session U
17:15 – 18:45 Session C	17:00 – 18:30 Session G	17:00 – 18:30 Session K	17:00 – 18:30 Session O	18:15 – 19:00 Closing Ceremony
19:00 – 20:30 Presidential Address and Awards	18:30 – 20:30 SIG meetings	18:45 – 20:00 Members Meeting	18:45 – 20:15 Session P	19:00 – ... Farewell Reception
20:30 – ... Opening Reception			20:30 – ... Conference Dinner	

*All times are local time (EEST).

KEYNOTE SPEAKERS



Prof. Dr. Daniel Ansari
University of Western
Ontario (CA)

**Numbers, Brains,
Development and
Education: Progress,
Challenges and Promise**

Daniel Ansari received his PhD from University College London in 2003. Presently, he is a Professor and Canada Research Chair in Developmental Cognitive Neuroscience and Learning in the Department of Psychology and the Brain & Mind Institute at the University of Western Ontario in London, Ontario, where he heads the Numerical Cognition Laboratory. Ansari and his team explore the developmental trajectory underlying both the typical and atypical development of numerical and mathematical skills, using both behavioral and neuroimaging methods.



Prof. Dr. Pirjo Aunio
University of Helsinki (FI)

**Individual Differences in
Early Numeracy, Executive
Functions, Motor Skills and
Physical Activity**

Since early 2000 Pirjo Aunio has conducted research in development and learning of mathematical skills, learning difficulties in mathematics, assessment of mathematical performance and development, and mathematical and related cognitive skills interventions. She has worked on developing evidence-based assessment and intervention tools to be used by teachers with funding from Ministry of Education and Culture. She has published more than 60 peer-review articles and books related to her research area. Pirjo Aunio works as a professor (Special Education, 2013->) at the University of Helsinki. Currently, she is also a visiting professor (Early Childhood Education) at the University of Johannesburg (South Africa).



**Prof. Dr. Sangeeta
Bagga-Gupta**
University of Jönköping (SE)

**On the Necessity of Major
and Minor *Synväändor* in
the Educational Sciences**

Sangeeta Bagga-Gupta is a professor of education with an interdisciplinary background. She is the scientific leader of the research environment CCD (Communication, Culture, Diversity), which she founded in the 1990s at Örebro University. Her research is characterised by a pronounced interdisciplinary/multidisciplinary perspective and has a strong international anchorage. Her research focuses on a number of themes in areas such as communication/language, identity, culture, digitalisation and learning based on ethnographic approaches at a micro-, meso- and macro-level, as well as socio-cultural and decolonial theories.



Prof. Dr. Sarit Barzilai
University of Haifa (IL)

Dr. Eva Thomm
University of Erfurt (DE)

**Dealing with
Disagreement: Coming to
Terms with the Social
Nature of Knowledge**

Sarit Barzilai is a Senior Lecturer in the Department of Learning and Instructional Sciences in the Faculty of Education at the University of Haifa. Her primary research interests are understanding and fostering learners' digital literacy and epistemic thinking (i.e., thinking about knowledge and knowing) so that they can cope with the complexities of twenty-first century knowledge societies.

Eva Thomm obtained her PhD in 2013 at the Westfälische Wilhelms-Universität Münster in Germany. She currently works at the University of Erfurt and researches topics such as science reception, understanding and explaining expert controversy, understanding and evaluating scientific evidence and evaluating and using sources of information (sourcing).

KEYNOTE SPEAKERS



Assoc. Prof. Crina Damsa
University of Oslo (NO)

**Together for Learning:
Understanding the
Ecosystem of
Collaborative Learning**

Crina Damsa is an associate professor and vice dean for innovation and digitalization at the Faculty of Educational Sciences at the University of Oslo in Norway. Her research focuses on social, cultural and technological aspects of learning across formal and informal settings, with an emphasis on dialogue, knowledge construction and pedagogical innovation.



Prof. Dr. Nikos Makris
Democritus University of
Thrace (GR)

**Consciousness as a
Compass for Navigating
Learning in Uncertain
Times**

Nikolaos Makris currently holds a professorship in Cognitive Psychology at the Democritus University of Thrace in Greece. He is also the director of the Cognitive Development and Learning Lab. His research focuses on cognitive development in children and adolescents, as well as executive functioning, cognitive neuropsychology and neuroscience.



Prof. Dr. Matthias Nückles
University of Freiburg (DE)

**Journal Writing as Medium
for Thinking and Learning:
Instructional Support to
Foster Self-regulated
Learning**

Matthias Nückles is an educational psychologist and professor of educational sciences at the University of Freiburg. In his research, he investigates how students' self-regulated learning can be effectively supported. He further seeks to improve understanding of successful teaching in order to create learning environments that support prospective teachers in the development of their teaching abilities. His research is interdisciplinary, as he tries to integrate ideas from educational, social and cognitive psychology as well as from the philosophy of science. Also, he fosters collaboration with researchers in mathematics, science, history and literature education.



Prof. Dr. Thierry Olive
University of Poitiers (FR)

**Learning to Master
Writing: Coping with
Cognitive Demands of
Writing Processes**

Thierry Olive is a psychology researcher at the University of Poitiers, specialising in language issues and, in particular, the cognitive mechanisms supporting writing skills in adults and learning to write in children with a learning or language disability. He also studies how writing tools, particularly digital tools, affect cognitive functioning.



Prof. Dr. Gale Sinatra
University of Southern
California (US)

**Why Deny? The
Psychology of Public
Misunderstanding of
Science**

Gale Sinatra is a Professor of Psychology and the Stephen H. Crocker Professor of Education at Rossier. Her areas of expertise include climate science education, evolution education, learning theory, knowledge construction, conceptual change learning, literacy acquisition, assessment, and the public understanding of science. Her recent research focuses on understanding the cognitive and motivational processes that lead to successful learning in science. Specifically, she focuses on the role of motivation and emotion in teaching and learning about controversial topics, such as biological evolution and climate change.

INVITED SYMPOSIA

ORGANISERS	SYMPOSIUM TITLE	SCHEDULING
Jennie Grammer, Adi Korisky, Pawel Matusz, Tieme Janssen Emerging Field Group	Attention Please! Real-world Neuroscience Investigations into Attention with Increasing Naturalism	Tuesday 22 August 12:15 – 13:45 AUTH_CH
Julian Roelle Emerging Field Group	Synthesizing Cognitive Load and Self-regulated Learning: Four Years of EFG MRE Research	Tuesday 22 August 15:00 – 16:30 AUTH_CH
Karel Kreijns, Derya Orhan Göksün, Kamakshi Rajagopal, Maartje Peters, Joshua Weidlich Emerging Field Group	Social Presence and Telepresence in Online Social Learning	Tuesday 22 August 15:00 – 16:30 UOM_CH
Christian Tarchi Italian Psychological Association (Section Developmental and Educational Psychology)	Raising Awareness About Online Readers' Awareness: Digital Competence in Multiple-Text Contexts	Tuesday 22 August 17:15 – 18:45 AUTH_CH
Andreas Demetriou The Cyprus Academy of Sciences, Letters and Arts	Educating the Developing Mind: An Overarching Theory for Development and Learning	Tuesday 22 August 17:15 – 18:45 UOM_CH
Andreas Lachner, Vincent Hoogerheide, Salome Wagner SIG 7	A Multi-disciplinary Perspective on Immersive Virtual Reality Learning and Instruction	Wednesday 23 August 08:00 – 09:30 AUTH_DC3
Christa Asterhan SIG 26	Teacher Learning About and Through Dialogue and Argumentation	Wednesday 23 August 08:00 – 09:30 AUTH_CH
Dietsje Jolles, Stephan Vogel SIG 22	How Learning and Education Shape the Brain	Wednesday 23 August 08:00 – 09:30 HELEXPO_CC
Rolf Strietholt International Association for the Evaluation of Educational Achievement (IAE)	Current Issues in Measuring and Modeling Motivational Outcomes International Large-scale Assessments	Wednesday 23 August 12:00 – 13:30 HELEXPO_CC
Rui Alexandre Alves EARLI Journal and Book Series	Meet the EARLI Editors	Wednesday 23 August 12:00 – 13:30 AUTH_CH

ORGANISERS	SYMPOSIUM TITLE	SCHEDULING
Alberto Cattaneo SIG 6	Investigating Technology Integration in Learning Activities Through the Lens of the ICAP Model	Wednesday 23 August 14:45 – 16:15 HELEXPO_CC
Martin Ubani, Alexander Unser, Sarah Delling SIG 19	Religions and Worldviews in Education Providing Hope of Social Sustainability	Wednesday 23 August 14:45 – 16:15 UOM_CH
Koen Veermans, Valentina Nachtigall SIG 20	Phases of Inquiry in Practice: Contexts and Variations	Wednesday 23 August 17:00 – 18:30 AUTH_CH
Franziska Cohen SIG 5	From Access to Impact: A Quality Perspective on Early Childhood Digital Education	Thursday 24 August 08:00 – 09:30 HELEXPO_CC
Essi Ryymin, Emmy Vrieling EAPRIL	Practice-based Research Exploring the Complexity Between Teaching, Wellbeing and Innovation	Thursday 24 August 08:00 – 09:30 UOM_CH
Katariina Salmela-Aro, Barbara Schneider AERA	The Effects of Social and Emotional Learning on Children's Cognitive and Psychological Wellbeing	Thursday 24 August 12:00 – 13:30 AUTH_CH
Jose Carlos Ocampo, Morgane Senden SIG 1	The Social Dimensions of Peer Assessment	Thursday 24 August 12:00 – 13:30 UOM_CH
Laure Kloetzer SIG 10	Aesthetic Experience as a Tool for Learning and Development	Thursday 24 August 14:45 – 16:15 UOM_A03
Malamati Tsapoutzoglou	Supporting Researchers at Risk: The Key Role of European Academia	Thursday 24 August 14:45 – 16:15 AUTH_CH
Nikolaos Makris Hellenic Psychological Society	Contributions of Greek Psychological Research in Education	Thursday 24 August 14:45 – 16:15 HELEXPO_CC
Perry den Brok, Frans Prins SIG 4	Improving University Teaching Through Teachers' Professional Learning and Development	Thursday 24 August 14:45 – 16:15 UOM_CH

ORGANISER	SYMPOSIUM TITLE	SCHEDULING
Yves Karlen, Charlotte Dignath SIG 16	A Look into the Crystal Ball: Which Directions Should Metacognition and SRL Research Take?	Thursday 24 August 17:00 – 18:30 HELEXPO_CC
Erika Löfström SIG 24	Transitions in Researcher Education and Careers	Thursday 24 August 17:00 – 18:30 AUTH_DC2
Valeska Grau Cardenas SIG 28	Creating Spaces for Children to Meet Uncertainty Through Play and Playful Learning	Friday 25 August 08:00 – 09:30 AUTH_DC3
Ann-Sofie Jägerskog SIG 9	To See the Yet Unseen – “Critical Aspects” as a Key to Developing Teaching and Students’ Learning	Friday 25 August 08:00 – 09:30 AUTH_CH
Ricardo Böheim, Jennifer Symonds Emerging Field Group	Different Perspectives on Momentary Situated Engagement in Classroom Contexts	Friday 25 August 12:00 – 13:30 UOM_CH
Jasperina Brouwer SIG 17	Social Network Tools: Advanced Methods to Contextualize Learning Research	Friday 25 August 12:00 – 13:30 AUTH_CH
Robert Klassen, Sophie Thompson-Lee EARLI Centre for Excellence in Research (E-CER)	Building a Better Understanding of Teachers’ Well-being	Friday 25 August 12:00 – 13:30 HELEXPO_CC
Carolin Hahnel, Cornelia Schoor SIG 2	Avenues to Improve Students’ Learning with Multiple Documents	Friday 25 August 14:45 – 16:15 UOM_CH
Jake McMullen EARLI Centre for Excellence in Research (E-CER)	Spontaneous Mathematical Focusing Tendencies in Early Childhood	Friday 25 August 14:45 – 16:15 AUTH_CH

ORGANISER	SYMPOSIUM TITLE	SCHEDULING
Lihong Huang SIG 13	Opportunities & Challenges of Learning and Assessment in Democratic Citizenship Education in Schools	Friday 25 August 14:45 – 16:15 HELEXPO_CC
Michael Goller, Maaïke Endedijk, Andreas Rausch SIG 14	Intensive Longitudinal Methods – The Way Forward in Researching Professional Learning	Friday 25 August 17:00 – 18:30 HELEXPO_CC
Pirjo Aunio SIG 15	Fundamental Academic Learning in Students with Various Educational Needs – Longitudinal Evidence	Friday 25 August 17:00 – 18:30 UOM_CH
Maria Bäcke SIG 21	Social Sustainability Efforts and Learning Experiences in Diverse and Multicultural Practices	Friday 25 August 17:00 – 18:30 AUTH_CH
Leen Catrysse SIG 27	Process Measures in the Era of Artificial Intelligence	Friday 25 August 18:45 – 20:15 HELEXPO_CC
Markku Hannula Emerging Field Group	Recent Advances of Eye-tracking Methods Applied in Educational Research	Friday 25 August 18:45 – 20:15 UOM_CH
Hanni Muukkonen EARLI Centre for Excellence in Research (E-CER)	Multimodal Analytical Approaches in Researching Collaborative Problem Solving	Friday 25 August 18:45 – 20:15 AUTH_CH
Tim Mainhard Emerging Field Group	The Potential of Biophysiology for Understanding Motivation, Engagement, and Learning	Saturday 26 August 08:00 – 09:30 AUTH_CH
Garvin Brod SIG 3	Understanding and Alleviating Difficulties in Science Learning: An Intra-individual Perspective	Saturday 26 August 09:45 – 11:15 UOM_CH

ORGANISER	SYMPOSIUM TITLE	SCHEDULING
Alexandra Nordström SIG 25	Roles and Nuances of Theoretical Work in Different Domains of Educational Research	Saturday 26 August 09:45 – 11:15 AUTH_CH
Hanna Järvenoja, Hanna Gaspard SIG 8	Situation- and Context-specificity of Motivation and Emotions	Saturday 26 August 09:45 – 11:15 UOM_CR
Charalambos Charalambous, Anna-Katharina Praetorius SIG 18	Non-convincing Effects in Research on Teaching Quality: Reasons and Possible Solutions	Saturday 26 August 12:00 – 13:30 UOM_CH
Eva Staffans The Nordic Educational Research Association	Creative, Inclusive and Equitable Play and Learning Environments: Children's Participation in Focus	Saturday 26 August 12:00 – 13:30 AUTH_DC3
Liana Konstantinidou SIG 12	Instructional Practices for Enhancing Literacy Skills Across Educational Contexts	Saturday 26 August 14:45 – 16:15 AUTH_DC2
Vivienne Baumfield BERA	Education: Societal Change, Hope and the State of the Discipline	Saturday 26 August 14:45 – 16:15 AUTH_DC3
Lisa Bardach EFG	More Than Just Noise? New Insights on Heterogeneity in Students' Perceptions of Instruction	Saturday 26 August 16:30 – 18:00 UOM_CH

CONFERENCE APP



PASSPHRASE: earli2023

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and receive push notifications for last-minute schedule changes. We strongly recommend all delegates to download the app, as it is the fastest and easiest way to consult the conference programme! Download the Guidebook app via the App or Play Store and enter the passphrase to download the EARLI 2023 app.

SIG MEETINGS

01

ASSESSMENT AND EVALUATION

Wednesday 23.08
18:30 – 19:30
UOM_A02

COMPREHENSION OF TEXT AND GRAPHICS

Wednesday 23.08
18:30 – 19:30
UOM_A05

02

03

CONCEPTUAL CHANGE

Wednesday 23.08
18:30 – 19:30
UOM_CR

HIGHER EDUCATION

Wednesday 23.08
19:30 – 20:30
UOM_CH

04

05

LEARNING AND DEVELOPMENT IN EARLY CHILDHOOD

Wednesday 23.08
18:30 – 19:30
UOM_R08 (joint meeting with SIG 28)

INSTRUCTIONAL DESIGN

Wednesday 23.08
18:30 – 19:30
UOM_CH (joint meeting with SIG 07)

06

07

TECHNOLOGY-ENHANCED LEARNING AND INSTRUCTION

Wednesday 23.08
18:30 – 19:30
UOM_CH (joint meeting with SIG 06)

SIG MEETINGS

08

MOTIVATION AND EMOTION

Wednesday 23.08
19:30 – 20:30
UOM_A02

PHENOMENOGRAPHY AND VARIATION THEORY

Wednesday 23.08
18:30 – 19:30
UOM_A10

09

10

SOCIAL INTERACTION IN LEARNING AND INSTRUCTION

Wednesday 23.08
19:30 – 20:30
UOM_A03

TEACHING AND TEACHER EDUCATION

Wednesday 23.08
18:30 – 19:30
UOM_A03

11

12

WRITING

Wednesday 23.08
19:30 – 20:30
UOM_A13

MORAL AND DEMOCRATIC EDUCATION

Wednesday 23.08
18:30 – 19:30
UOM_A11

13

14

LEARNING AND PROFESSIONAL DEVELOPMENT

Wednesday 23.08
19:30 – 20:30
UOM_R08

SIG MEETINGS

15

SPECIAL EDUCATIONAL NEEDS

Wednesday 23.08
18:30 – 19:30
UOM_R09

METACOGNITION AND SELF-REGULATED LEARNING

Wednesday 23.08
19:30 – 20:30
UOM_CR

16

17

METHODS IN LEARNING RESEARCH

Wednesday 23.08
18:30 – 19:30
UOM_A07

EDUCATIONAL EFFECTIVENESS AND IMPROVEMENT

Wednesday 23.08
19:30 – 20:30
UOM_R05

18

19

RELIGIONS AND WORLDVIEWS IN EDUCATION

Wednesday 23.08
18:30 – 19:30
UOM_A06

INQUIRY LEARNING

Wednesday 23.08
19:30 – 20:30
UOM_A06

20

21

LEARNING AND TEACHING IN CULTURALLY DIVERSE SETTINGS

Wednesday 23.08
18:30 – 19:30
UOM_R05

SIG MEETINGS

22

NEUROSCIENCE AND EDUCATION

Wednesday 23.08
19:30 – 20:30
UOM_A04

24

RESEARCHER EDUCATION AND CAREERS

Wednesday 23.08
19:30 – 20:30
UOM_A10

EDUCATIONAL THEORY

Wednesday 23.08
18:30 – 19:30
UOM_A04

25

26

ARGUMENTATION, DIALOGUE AND REASONING

Wednesday 23.08
19:30 – 20:30
UOM_A07

ONLINE MEASURES OF LEARNING PROCESSES

Wednesday 23.08
18:30 – 19:30
UOM_A13

27

PLAY, LEARNING AND DEVELOPMENT

Wednesday 23.08
18:30 – 19:30
UOM_R08 (joint meeting with SIG 5)

28

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For the 50th anniversary of UHasselt, the **Higher Education With Impact conference** wants to bring together educators, researchers and scientific educational experts to talk about higher education with impact. The Educational Conference will be a platform for innovative thinking about the role of higher education in driving impact and solving complex societal challenges.



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Conference Annotations:

Conference Annotations:

NEW SESSIONS:

- D:28 - INVITED WORKSHOP: ACADEMIC PUBLISHING IN ROOM UOM_A08.

- I:26 - INVITED WORKSHOP: PUBLISHING IN LEARNING & INSTRUCTION: BECOMING A PRODUCTIVE RESEARCHER AND PUBLISHING AUTHOR IN ROOM UOM_A07.

- K:26 - INVITED PANEL: SUPPORTING TEACHING IN HIGHER EDUCATION: THE ROLE OF TEACHING AND LEARNING CENTERS AT TIMES OF CHANGE IN ROOM UOM_CH.

WEDNESDAY, 23 AUGUST 2023

Session D: 28

Time: 08:00-09:30

Location: UOM_A08

INVITED WORKSHOP: ACADEMIC PUBLISHING

Academic Publishing

Hans Gruber, University of Regensburg, Germany; Nina Bonderup Dohn, University of Southern Denmark, Denmark

THURSDAY, 24 AUGUST 2023

Session I: 26

Time: 12:00-13:30

Location: UOM_A07

INVITED WORKSHOP: PUBLISHING IN LEARNING & INSTRUCTION: BECOMING A PRODUCTIVE RESEARCHER AND PUBLISHING AUTHOR

Chair

Gert Rijlaarsdam, University of Amsterdam, The Netherlands

Publishing in Learning & instruction: Becoming a Productive Researcher and Publishing Author

Alexandra List, The Pennsylvania State University, United States; Wilfried Admiraal, Oslo Metropolitan University, Norway; Sven De Maeyer, Antwerp University, Belgium; Minna Hannula-Sormunen, University of Turku, Finland

Session K: 26	Time: 17:00-18:30	Location: UOM_CH
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INVITED PANEL: SUPPORTING TEACHING IN HIGHER EDUCATION: THE ROLE OF TEACHING AND LEARNING CENTERS AT TIMES OF CHANGE

Chair Dimitrios Koveos, Aristotle University of Thessaloniki, Greece	Reflections on 20 years of a Teaching and Learning Centre at University College Dublin: Building a Community and Supporting the Institution David Jennings, University College Dublin, Ireland
Organisers Domna Kakana, Aristotle University of Thessaloniki, Greece; Thrasyvoulos Tsiatsos, Aristotle University of Thessaloniki, Greece	Teaching and Learning Centers in Greece: From Vision to Practice Maya Satratzemi, University of Macedonia, Thessaloniki
	TLCs at the University of Amsterdam: towards local and international faculty development Tom Broens, University of Amsterdam, The Netherlands
	Disability and Higher Education: The Quest for Authentic Inclusivity Susana Padeliadu, Aristotle University of Thessaloniki, Greece
	The Opportunities and Challenges of Technology for Teaching and Learning in Higher Education Thrasyvoulos Tsiatsos, Aristotle University of Thessaloniki, Greece

Policy Makers Session: 1

Time: 10:30-11:30

Location: HELEXPO_CC

POLICY MAKERS PANEL: LEARNING AND INSTRUCTION IN THE DIGITAL AGE: CHALLENGES AND HOPES FOR EDUCATION AND DEMOCRACY**Chair**

Eleni Kyza, Cyprus University of Technology, Cyprus

Organisers

Eleftheria Gonida, Aristotle University of Thessaloniki, Greece; Eleni Kyza, Cyprus University of Technology, Cyprus

Learning and Instruction in the Digital Age: Challenges and Hopes for Education and Democracy

ANDREAS DEMETRIOU, University of Nicosia and Cyprus Academy of Sciences, Letters, and Arts, Cyprus; Anantha Duraiappah, UNESCO MGIEP, India; Sanna Järvelä, University of Oulu, Finland; Roger Saljo, University of Gothenburg, Sweden

Session A: 1

Time: 12:15-13:45

Location: AUTH_CH

INVITED SYMPOSIUM: ATTENTION PLEASE! REAL-WORLD NEUROSCIENCE INVESTIGATIONS INTO ATTENTION WITH INCREASING NATURALISM.**Chair**

Tieme Janssen, Vrije Universiteit Amsterdam, Netherlands

Organisers

Jennie Grammer, UCLA, United States; Adi Korisky, Bar-Ilan University, Israel; Pawel Matusz, University of Applied Sciences Western Switzerland (HES-SO Valais-Wallis), Switzerland; Tieme Janssen, Vrije Universiteit Amsterdam, Netherlands

Discussant

Nienke van Atteveldt, Vrije Universiteit Amsterdam, Netherlands

The context-dependence of neurocognitive attentional control functions

Pawel Matusz, University of Applied Sciences Western Switzerland (HES-SO Valais-Wallis), Switzerland

Examining elementary school children's attention while learning online

Jennie Grammer, UCLA, United States

Are you listening to me? Attention in real-life classrooms

Elana Zion Golumbic, Bar Ilan University, Israel; Adi Korisky, Bar-Ilan University, Israel

Mobile EEG neurofeedback to convince high school students of the controllable nature of their brain

Tieme Janssen, Vrije Universiteit Amsterdam, Netherlands

ANNOTATIONS:

EFG INVITED SYMPOSIUM

Session A: 2

Time: 12:15-13:45

Location: UOM_CH

INVITED SYMPOSIUM: 'HOPE' FOR DISADVANTAGED STUDENTS: EXTENDED EDUCATION IN A GLOBAL PERSPECTIVE**Chair**

Nanine Lilla, Freie Universität Berlin, Germany

Organisers

Nanine Lilla, Freie Universität Berlin, Germany; Marianne Schuepbach, Freie Universität Berlin, Germany; Ingrid Gogolin, University of Hamburg, Germany; Liesel Ebersöhn, Unit for Education Research in AIDS, South Africa

Discussants

David Thore Gravesen, VIA University College, Denmark; Ioulia Televantou, European University Cyprus, Cyprus

Educational quality of extended education in Germany with a focus on disadvantaged students

Jule Schmidt, Freie Universität Berlin, Germany; Haiqin Ning, Freie Universität Berlin, Germany; Nanine Lilla, Freie Universität Berlin, Germany; Marianne Schuepbach, Freie Universität Berlin, Germany

The role of background characteristics for participation in all-day schooling in Germany

Luise Krejciak, Universität Hamburg, Germany; Ingrid Gogolin, University of Hamburg, Germany

The Conundrum of OSHC services in Australia

Jennifer Cartmel, Griffith University, Australia; Bruce Hurst, University of Melbourne, Australia

Why young people in high-poverty contexts choose not to participate in Out-of-School Time provision

Kirstin Kerr, University of Manchester, United Kingdom; Claire Forbes, University of Manchester, United Kingdom

ANNOTATIONS:

INVITED SYMPOSIUM OF THE WORLD EDUCATION RESEARCH ASSOCIATION (WERA)

Session A: 3

Time: 12:15-13:45

Location: UOM_A03

SYMPOSIUM: NEW PROCEDURE TO ASSESS EXECUTIVE FUNCTION AND PREDICT LEARNING OUTCOME IN SPECIAL EDUCATIONAL NEEDS**Chair**

Chiara Pecini, University of Florence, Italy

Discussant

Pirjo Aunio, University of Helsinki, Finland

The development of Executive Functions with early term toddlers from families with social burdens

Minna Törmänen, University of Teacher Education in Special Needs Zurich, Switzerland; University of Helsinki, Finland, Switzerland; Simone Schaub, University of Teacher Education in Special Needs, Switzerland; Erich Ramseier, PH Bern, University of Teacher Education, Berne, Switzerland; Christina Koch, University of Teacher Education in Special Needs, Zurich, Switzerland; Alex Neuhauser, University of Applied Sciences of Special Needs Education, Switzerland; Isabelle Kalkusch, University of Teacher Education in Special Needs, Zurich, Switzerland; Patsawee Rodcharoen, University of Teacher Education in Special Needs, Zurich, Switzerland & University of Bern, Switzerland; Andrea Lanfranchi, University of Applied Sciences of Special Needs Education, Switzerland

Executive functions in blind and deaf children: a Tablet-based assessment

Camila Martínez, Pontificia Universidad Católica de Chile, CIE 160007, Chile; María Victoria Espinoza, Centre for Educational Justice at the Pontifical Catholic University of Chile., Chile; Catalina Santa Cruz, Centre for Educational Justice at the Pontifical Catholic University of Chile., Chile; Ricardo Rosas Diaz, CEDEti-UC, Chile

Assessing inattentive children's executive functioning in quiet and noise

Barbara Arfé, University of Padova, Italy; Gaia Spacciarelli, Human Inspired Technology Centre, University of Padova, Italy; Chiara Montuori, Human Inspired Technology Centre, University of Padova, Italy; Flavia gheller, School of Psychology, University of Padova, Italy, Italy

Paper and digital learnings in low and high performers: the involvement of Executive Functions

Costanza Ruffini, University of Florence, Italy; Christian Tarchi, University of Florence, Italy; Chiara Pecini, University of Florence, Italy

Session A: 4

Time: 12:15-13:45

Location: AUTH_DC3

SYMPOSIUM: THEORETICAL OR METHODOLOGICAL PERSPECTIVE ON PROCESS-ORIENTED RESEARCH OF MOTIVATION AND EMOTION**Chair**

Tiina Susanna Törmänen, University of Oulu, Finland

Organiser

Hanna Jarvenoja, University of Oulu, Finland

Discussant

Roger Azevedo, University of Central Florida, United States

Theoretical Challenges for Motivational Regulation revisited: Data Granularity and Time Frame

Thomas Martens, Medical School Hamburg, Germany; Moritz Niemann, MSH Medical School Hamburg, Germany; Diana Pistoll, Medical School Hamburg, Germany

Paradigmatic shifts in theory and methods regarding short-term motivational & emotional processes

Julia Moeller, Universität Leipzig, Germany; Julia Dietrich, Friedrich-Schiller-University Jena, Germany; Jessica Baars, Leipzig University, Germany; Miriam Jähne, Friedrich-Schiller-University Jena, Germany; Lennart Nörenberg, Universität Leipzig, Germany

Multilayered perspective on Motivation and Emotion Regulation in Collaborative Learning

Hanna Jarvenoja, University of Oulu, Finland; Tiina Susanna Törmänen, University of Oulu, Finland; Tatiana Shubina, University of Oulu, Finland, Finland; Kristiina Mänty, University of Oulu, Finland; Sanna Järvelä, University of Oulu, Finland

Examining Medical Residents' Physiological Synchrony During Crisis Simulation Training

Jason Harley, McGill University, Canada; Lucia Patino, McGill University, Canada; Matthew Moreno, McGill University, Canada; Keerat Grewal, McGill University, Canada; Sayed Azher, McGill University, Canada; Negar Matin, McGill University, Canada

Session A: 5

Time: 12:15-13:45

Location: AUTH_DC1

SYMPOSIUM: GOALS, REASONS, AND COMPLEXES: CURRENT ADVANCES IN ACHIEVEMENT GOAL RESEARCH**Chairs**

Martin Daumiller, University of Augsburg, Germany; Marc Philipp Janson, University of Mannheim, Germany

Discussant

Ruth Butler, Hebrew University of Jerusalem, Israel

Beyond Approach-Avoidance: Achievement Goals, Regulatory Foci, and Self-Guides

Sophie Bossert, University of Mannheim, Germany; Marc Philipp Janson, University of Mannheim, Germany

Do Perfectionistic Tendencies Moderate the Effect of Goals and Goal Reasons on Academic Well-being?

Markku Niemivirta, University of Eastern Finland, Finland; Antti Pulkka, National Defence University, Finland; Anna Tapola, University of Helsinki, Finland; Heta Tuominen, University of Eastern Finland, Finland

Autonomous Reasons Underlying Achievement Goals and Challenge-seeking, Procrastination, and Grades

Athanasios Mouratidis, National and Kapodistrian University of Athens, Greece; Aikaterini Michou, University of Ioannina, Greece; Aysenur Alp, University of Zurich, Switzerland; Aylin Kocak, Izmir University of Economics, Turkiye; Şule Selçuk, University of Kastamonu, Turkiye

You did well! Does Feedback Independently or Interactively with Goal Complexes Affect Outcomes?

Aikaterini Michou, University of Ioannina, Greece; Servet Altan, MEF University, Turkiye; Athanasios Mouratidis, National and Kapodistrian University of Athens, Greece; Maarten Vansteenkiste, Ghent University, Belgium; Caroline Pulfrey, Swiss Federal Institute of Technology, Switzerland

Session A: 6

Time: 12:15-13:45

Location: UOM_A06

SYMPOSIUM: DETERMINANTS OF SCHOOL SUCCESS FOR IMMIGRANT CHILDREN**Chair**

Sebastian Nicolas Thomas Vogel, TU Dortmund University, Germany

Organisers

Justine Stang-Rabrig, TU Dortmund University, Germany; Nele McElvany, TU Dortmund University, Germany

Discussant

FROSSO MOTTI, National and Kapodistrian University of Athens, Greece

Primary school enrollment of refugee children in Germany

Melanie Olczyk, Martin-Luther Universität Halle-Wittenberg, Germany; Julian Seuring, Leibniz Institute for Educational Trajectories (LIfBi), Germany; Gisela Will, Leibniz Institute for Educational Trajectories (LIfBi), Germany

English language and reading development of migrant children in Ireland

Merike Darmody, The Economic and Social Research Institute, Ireland; Helen Russell, The Economic and Social Research Institute, Ireland; Frances McGinnity, The Economic and Social Research Institute, Ireland

What helps immigrant and refugee children succeed at the end of German primary school?

Sebastian Nicolas Thomas Vogel, TU Dortmund University, Germany; Justine Stang-Rabrig, TU Dortmund University, Germany; Philipp Jugert, Institute for Psychology of Duisburg-Essen University, Germany; Birgit Leyendecker, Faculty of Psychology, Child and Family Research, Ruhr-University Bochum, Germany; Nele McElvany, TU Dortmund University, Germany

Determinants of school success for immigrant children - the case of newly arrived students in Sweden

Nihad Bunar, Department of Special Education, Stockholm University, Sweden

Session A: 7

Time: 12:15-13:45

Location: UOM_A02

SYMPOSIUM: THE DEVELOPMENT OF FEEDBACK LITERACY: FROM INTERVENTION PROGRAMS TO PROGRAMME INTERVENTIONS**Chair**

Martijn Leenknecht, HZ University of Applied Sciences, Netherlands

Organiser

Martijn Leenknecht, HZ University of Applied Sciences, Netherlands

Discussant

Rachelle Esterhazy, University of Oslo, Norway

Can Students' Feedback Literacy be Improved? A Scoping Review of Interventions

David Boud, Deakin University/University of Technology Sydney, Australia; Joanna Tai, Deakin University, Australia; Tegan Miller, Deakin University, Australia; Phillip Dawson, Deakin University, Australia

The Development of Feedback Literacies and Identities of First Year Education Students

Juuso Henrik Nieminen, The University of Hong Kong, Finland

Feedback Seeking of Undergraduate Nursing Students: From Whom and Why?

Martijn Leenknecht, HZ University of Applied Sciences, Netherlands; Hanneke Wiltjer, HZ University of Applied Sciences, Netherlands

Student and Teacher Feedback Literacy in the Context of Programmatic Assessment

Liesbeth Baartman, University of Applied Sciences Utrecht, Netherlands; Natalie Liebrechts, Utrecht University, Netherlands

Session A: 8

Time: 12:15-13:45

Location: UOM_CR

SYMPOSIUM: EMOTIONAL DESIGN AND THE NECESSARY BUT NOT SUFFICIENT INFLUENCE OF TRIGGERING MOTIVATION**Chair**

Tino Endres, University of Freiburg, Germany

Organiser

Tino Endres, University of Freiburg, Germany

Discussant

K. Ann Renninger, Swarthmore College, United States

Contextual animation in multimedia learning materials for children: saga of null results continues

Cyril Brom, Charles University, Czech Republic; Karolína Schubertová, Czech Television, Faculty of Arts, Czech Republic; Anna Drobná, Faculty of Education, Faculty of Mathematics and Physics, Czech Republic; Kristina Volná, Czech Television, Czech Republic

How emotionally designed scaffolds affect learning and motivational outcomes in game-based learning?

Antti Koskinen, University of Tampere, Finland, Finland; Jake McMullen, University of Turku, Finland; Manuel Ninaus, University of Graz, Austria; Kristian Kiili, Tampere University, Finland

Narratives as feature of emotional designed whiteboard animations – learning effects and moderators

Sascha Schneider, University of Zurich, Switzerland

Can emotional design be an aid to overcome the hurdle of high opportunity-costs in learning?

Charlotte Vössing, University of Freiburg, Germany; Tino Endres, University of Freiburg, Germany; Alexander Eitel, University of Giessen, Germany; Alexander Renkl, University of Freiburg, Germany

Session A: 9

Time: 12:15-13:45

Location: AUTH_DC2

SYMPOSIUM: IMPLICATIONS OF DIFFERENT RESPONSES TO ERRORS. PERSPECTIVES FROM SEVERAL EDUCATIONAL CONTEXTS**Chair**

Annalisa Soncini, University of Bologna, Italy

Discussant

Eleftheria Gonida, Aristotle University of Thessaloniki, Greece

Error climate and alienation from teachers: A longitudinal analysis in primary school

Gabriele Steuer, University of Bielefeld, Germany; Alyssa Laureen Grecu, Center for Research on Education and School Development, Germany; Julia Morinaj, University of Bern, Switzerland

Supportive error feedback fosters students' positive emotions and motivation

Annalisa Soncini, University of Bologna, Italy; Maria Cristina Matteucci, University of Bologna, Italy

How you talk to your kids about setbacks and failures matters

Elizabeth Peterson, University of Auckland, New Zealand; Sharma Tanvi, The University of Auckland, New Zealand; Amy Bird, The University of Auckland, New Zealand; Elaine Reese, The University of Auckland, New Zealand; Annette Henderson, The University of Auckland, New Zealand; Varun Ramgopal, Madras Institute of Development Studies, India; Susan M B Morton, The University of Auckland, New Zealand

The value of (learning from) mistakes in teacher education in Finland and Germany

Annika Breternitz, Technische Hochschule Ostwestfalen-Lippe, Germany; Maria Tulis, University of Salzburg, Austria

Session A: 10

Time: 12:15-13:45

Location: AUTH_TE2

SINGLE PAPER: ONLINE LEARNING IN HIGHER EDUCATION**Chair**

Daniel Dinsmore, University of North Florida, United States

The Role of Attitudes, Peer and Lecturer Norms in Predicting How Students Use Lecture Recordings.

Kasia Banas, University of Edinburgh, United Kingdom; Thomas Thejll-Madsen, University of Glasgow, United Kingdom; Anita Tobar-Henríquez, University of Edinburgh, United Kingdom; Eva Murzyn, University of Edinburgh, United Kingdom

Measurement and Promotion of Critical Online Reasoning Skills among Young Professionals

Lisa Martin de los Santos, Johannes Gutenberg University of Mainz, Germany; Olga Zlatkin-Troitschanskaia, Johannes Gutenberg University of Mainz, Germany; Marie-Theres Nagel, Johannes Gutenberg University Mainz, Germany; Denis Federiak, Johannes Gutenberg University of Mainz, Germany

Keep Some Distance: Seductive Details Are Only Harmful When Closely Related to the Learning Content

Lisa Bender, University of Freiburg, Germany; Alexander Renkl, University of Freiburg, Germany; Kim Brosemer, University of Education Freiburg, Germany; Alexander Eitel, University of Giessen, Germany

How Social Cues Influence Students' Non-Cognitive Experiences In Online Feedback Processes

Theresa Ruwe, Humboldt-Universität zu Berlin, Germany; Elisabeth Mayweg, Humboldt University of Berlin, Germany

Session A: 11

Time: 12:15-13:45

Location: UOM_A08

SINGLE PAPER: MOTIVATION AND RESILIENCE DURING COVID-19**Chair**

Rolf Strietholt, IEA Hamburg, Germany

Motivation and self-regulated learning during the COVID-19 pandemic - a systematic review

Tamara Van Gog, Utrecht University, Netherlands; Ewa Miedzobrodzka, Utrecht University, Netherlands; Willeke Kitselaar, Leiden University, Netherlands; George Burchell, Vrije Universiteit Amsterdam, Netherlands; Julia Henrich, Leiden University, Netherlands; Chris Hoeboer, Amsterdam University Medical Centers Location AMC, Netherlands; Lydia Krabbendam, Vrije Universiteit Amsterdam, Netherlands; Milene Bonte, Maastricht University, Netherlands; Wouter van den Bos, University of Amsterdam, Netherlands; Peter Verkoeijen, Erasmus University Rotterdam, Netherlands

Perception of academic success among face-to-face and distance students during the covid period

Jean-Marc Meunier, Université Paris 8, France; Elisabetta Zibetti, Université Paris 8, France

Perceptions of elementary school students regarding remote learning due to COVID-19

Edit Tóth, SZTE Institute of Education, Hungary; Benő Csapó, University of Szeged, Hungary

Understanding E-resilience in Education: Reviewing Public Policy Education during and after COVID-19

Mindel van de Laar, Maastricht University, Netherlands; Julieta Marotta, UNU-MERIT / Maastricht University, Netherlands

ANNOTATIONS:

PLEASE NOTE THAT THIS SESSION ROOM HAS CHANGED FROM AUTH_TE1 TO UOM_A08.

Session A: 12

Time: 12:15-13:45

Location: AUTH_T202

SINGLE PAPER: VIRTUAL REALITY LEARNING ENVIRONMENTS**Chair**

Elaine Munthe, University of Stavanger, Norway

What and how to learn with Virtual Reality Learning Environments?

Felix Kapp, Leibniz Institute for Science and Mathematics Education (IPN), Germany; Pia Spangenberg, Universität Potsdam, Germany

Desktop virtual reality learning environments: Can cues reduce search time and support learning?

Daniela Decker, Deutsches Institut für Erwachsenenbildung, Germany; Martin Merkt, Deutsches Institut für Erwachsenenbildung, Germany

Primary teachers didactical design for students' learning in VR environments

Emma Edstrand, Halmstad University, Sweden; Sylvana Sofkova Hashemi, University of Gothenburg, Sweden; Jeanette Sjöberg, Halmstad university, Sweden

The use of virtual reality scenarios in science: Results of a design-based research experiment

Bruno Poellhuber, University of Montreal, Canada; Sebastien Wall-Lacelle, University of Montreal, Canada; Christine Marquis, Cégep de Saint-Jérôme, Canada; Normand Roy, University of Montreal, Canada

Session A: 13

Time: 12:15-13:45

Location: AUTH_T002

SINGLE PAPER: CITIZENSHIP EDUCATION, SUSTAINABILITY AND POLITICAL ENGAGEMENT**Chair**

Robin Nagy, UNSW, Australia

Civic education and social interactions at school as drivers of intended electoral participation

Daniel Deimel, University of Duisburg-Essen, Germany; Katrin Hahn-Laudenberg, University of Leipzig, Germany; Johanna Fee Ziemes, University of Duisburg-Essen, Germany; Hermann J. Abs, University of Duisburg-Essen, Germany

Online political engagement of upper secondary students: Does media education have an impact?

Tessa Consoli, University of Zurich, Institute of Education, Switzerland

Evaluating Education for Sustainability: Survey creation based on a Systematic Literature Review

Alessio Surian, Università degli Studi di Padova, Italy; Diego Posada, University of Padova, Italy; Diego Di Masi, University of Turin, Italy

Sustainable citizenship in South America

Antonia Larrain, Universidad Alberto Hurtado, Chile; Paulina Freire, Pontificia Universidad Católica de Chile, Chile; Ana Andaur, Pontificia Universidad Católica de Chile, Chile; María Teresa Rojas, Universidad Alberto Hurtado, Chile; Hernán Cofré, Pontificia Universidad Católica de Valparaíso, Chile; Claudia Vergara, Universidad Alberto Hurtado, Chile; Joaquin Grez Mansilla, Pontificia Universidad Católica de Chile, Chile

Session A: 14

Time: 12:15-13:45

Location: UOM_A13

SINGLE PAPER: RESEARCH-BASED TEACHER EDUCATION**Chair**

David Purpura, Purdue University, United States

Research-based teacher education: preparing students to be research active teachers.

Aimie Brennan, Marino Institute of Education, Ireland

Legitimising undergraduate educational research methodology courses

Athanasios Verdis, National and Kapodistrian University of Athens, Greece; Liza Dorli, National & Kapodestrian University of Athens, Greece

Pre-service teachers' beliefs shape their views of the value of scientific evidence for teaching

Timo Reuter, Rheinland-Pfälzische Technische Universität Kaiserslautern - Landau, Germany; Miriam Leuchter, RPTU Landau, Germany

Student teachers' research competences after writing a Master thesis in the Master of Teaching

Stefanie De Jonge, Ghent University, Belgium; Hanne Tack, Ghent University, Belgium; Evelien Opdecam, Ghent University, Belgium; Leen Haerens, Ghent University, Belgium

Session A: 15

Time: 12:15-13:45

Location: UOM_A04

SINGLE PAPER: CRITICAL THINKING IN DIFFERENT LEVELS OF EDUCATION**Chair**

Silke Vanparys, Ghent University, Belgium

A multi-country comparison of lower secondary students' critical thinking under different curricula

Samantha-Kaye Johnston, The University of Oxford, United Kingdom; Joshua McGrane, The University of Melbourne, Australia; Therese N. Hopfenbeck, The University of Melbourne, Australia; Mireia Vendrell Morancho, Universidad Complutense de Madrid, Spain

The effects of reading and writing instruction on writing about historical significance

Johan van Driel, University of Amsterdam, Netherlands; J.P. van Drie, University of Amsterdam, Netherlands; Carla Van Boxtel, University of Amsterdam, Netherlands

The filter bubble app: how can secondary school students become aware of algorithmic filtering?

Tjitske de Groot, Utrecht University, Netherlands; Maria De Haan, Utrecht University, Netherlands

Critical Thinking in Primary School – a Large Scale Design-Based Research Project

Emilia Andersson-Bakken, Oslo Metropolitan University, Norway; Kirsti Marie Jegstad, Oslo Metropolitan University, Norway; Tuva Bjørkvold, Oslo Metropolitan University, Norway

Session A: 16

Time: 12:15-13:45

Location: UOM_A10

SINGLE PAPER: WELL-BEING IN GRADUATE STUDENTS**Chair**

Anki Strom, University of South-Eastern Norway, Norway

Justice and metacognitive awareness as predictors of master students' wellbeing in supervision

Anne Haarala-Muhonen, University of Helsinki, Finland; Liisa Myyry, University of Helsinki, Finland

How Does Supervision Influence Doctoral Supervisor's Occupational Wellbeing?

Lotta Tikkanen, University of Helsinki, Finland; Henrika Anttila, University of Helsinki, Finland; Kirsi Pyhältö, University of Helsinki, Finland

PhD holder transitions outside academia: The role of social support in (dis)engaging experiences

Sara Rönkkönen, University of Helsinki, Finland; Viivi Virtanen, Häme University of Applied Sciences, Finland; Lynn McAlpine, University of Oxford / McGill University, Canada; Montserrat Castelló, Ramon Llull University, Spain; Kirsi Pyhältö, University of Helsinki, Finland; Marina García-Morante, Blanquerna, Universitat Ramon Llull, Spain

Precarious careers: postdoctoral researchers and wellbeing at work

Inge Van der weijden, Leiden University, Netherlands; Christine Teelken, VU University Amsterdam, Netherlands

Session A: 17

Time: 12:15-13:45

Location: AUTH_T102

SINGLE PAPER: ART EDUCATION**Chair**

Suzanne Hiller, Blue Swallow Farm Foundation, Center for Research and Instruction in the Natural World, United States

Variation theory as teaching theory. In hope for a sustainable classroom concerning assessment
Pernilla Ahlstrand, Department of Pedagogical, Curricular and Professional Studies,, Sweden

Performative arts training for Nursery teachers. Shared learning and impacts

Anna Ciraso, Universitat Autònoma de Barcelona, Spain; Silvia Blanch, Universitat Autònoma de Barcelona, Spain; Gemma Paris, Universitat Autònoma de Barcelona, Spain

Art and Design teachers' Personal Rules of Thumb while Designing Design Based Education Studios

Migchiël Riemer van Diggelen, NHL University of Applied Sciences, Netherlands; Marjanne van Gameren, Open University of the Netherlands, Netherlands; Arnoud Evers, Open University of the Netherlands, Netherlands

Session A: 18

Time: 12:15-13:45

Location: UOM_R05

SINGLE PAPER: TEACHER PROFESSIONAL DEVELOPMENT, TEACHING QUALITY AND ACADEMIC ACHIEVEMENT**Chair**

Alexander Groeschner, Friedrich Schiller University Jena, Germany

Effects of teacher professional development on student academic achievement: A meta-analysis
Natasha Dmoshinskaia, University of Twente, Netherlands; Adrie Visscher, Univ. of Twente, Netherlands; Marta Pellegrini, University of Cagliari, Italy

The role of a data coach in supporting data use in school teams: voices of experts and practitioners

Iris Decabooter, Hasselt University, Belgium; Ariadne Warmoes, Vrije Universiteit Brussel (VUB), Belgium; Katrien Struyven, Hasselt University / Vrije Universiteit Brussel, Belgium; Els Consuegra, Vrije Universiteit Brussel, Belgium; Roos Van Gasse, University of Antwerp, Belgium

Differentiating homework from the perspective of Swiss secondary teachers

Christine Feiss, Universität Salzburg, Switzerland; Gerda Hagenauer, University of Salzburg, Austria; Sandra Moroni, University of teacher education Bern, Switzerland

What competencies do teachers need to use students' perceptions of teaching quality?

Lucas Silva, University of Groningen, Netherlands; Kim Schildkamp, University of Twente, Netherlands; Adrie Visscher, Univ. of Twente, Netherlands; Roel J. Bosker, Rijksuniversiteit Groningen, Dept of Education and GION, Netherlands

Session A: 19

Time: 12:15-13:45

Location: UOM_R08

SINGLE PAPER: SIMULATION-BASED LEARNING IN TEACHER EDUCATION**Chair**

Cris Castro, University of Birmingham, United Kingdom

Pre-service teachers practicing the ways of scaffolding self-regulated learning with simulation

Piia Naykki, University of Jyväskylä, Finland; Minna Silvennoinen, Jyväskylä University of Applied Sciences, Finland; Sirpa Laitinen-Väänänen, JAMK University of Applied Sciences, Finland; Saara Pyykkönen, University of Jyväskylä, Finland; Jenni Latva-aho, University of Jyväskylä, Finland; Heini Ikäheimo, JAMK University of Applied Sciences, Finland

The differential effect of simulations on SEL among preservice, beginner, and experienced educators

Ronen Kasperski, Gordon College of Education, Israel; Merav Hemi, Gordon Academic College, Israel

Professional inquiry in teacher education: Positioning student teachers as co-developers

Birgitte Lund Nielsen, VIA University College, Denmark; Anja Madsen Kvols, VIA University College, Denmark

Analyzing the potential of interdisciplinary collaborative diagnosing in a school context

Amadeus J. Pickal, University of Hildesheim, Germany; Katharina Engelmann, Universität Hildesheim, Germany; Birgit J. Neuhaus, LMU Munich, Germany; Raimund Girwidz, LMU Munich, Germany; Christof Wecker, Universität Hildesheim, Germany

Session A: 20

Time: 12:15-13:45

Location: UOM_A05

SINGLE PAPER: COLLABORATIVE KNOWLEDGE CONSTRUCTION WITH THE USE OF TECHNOLOGY**Chair**

Florentine Hicketier, Friedrich-Schiller-University Jena, Germany

Socioemotional interaction and co-construction of knowledge in online synchronous teacher education

Auli Lehtinen, Department of Teacher Education, University of Jyväskylä, Finland; Piia Naykki, University of Jyväskylä, Finland; Emma Kostiaainen, Department of Teacher Education, University of Jyväskylä, Finland

Signs of self-organization in technology-mediated knowledge co-creation

Niina Halonen, University of Helsinki, Finland; Kirsti Lonka, University of Helsinki, Finland

Fostering computer-supported collaboration knowledge and interaction through scripting and awareness

Isis Tunngigkeit, Ruhr University Bochum, Germany; Sebastian Strauß, Ruhr-University Bochum, Germany; Julia Eberle, Ruhr-Universität Bochum, Germany; Arlind Avdullahu, Ruhr-University Bochum, Germany; Nikol Rummel, Ruhr University Bochum, Germany

Supporting student teachers' reflection through assessment: the case of reflective podcasts

Laura Ketonen, University of Jyväskylä, Finland; Juuso Henrik Nieminen, The University of Hong Kong, Finland

Session A: 21

Time: 12:15-13:45

Location: UOM_R09

SINGLE PAPER: RESEARCHERS' EDUCATION, PERCEIVED COMPETENCE AND COMMUNICATION WITH PRACTITIONERS**Chair**

Angeliki Lithoxidou, University of Western Macedonia, Greece

Validation of a Questionnaire for Measuring Perceived Research Competence

Sarah Marrs, Virginia Commonwealth University, United States; Carla Quesada-Pallarès, Universitat Autònoma de Barcelona, Spain; Korinthia D. Nicolai, School of Education, Virginia Commonwealth University, United States; Elizabeth A. Severson-Irby, School of Education, Virginia Commonwealth University, United States; Jose Reinaldo Martinez-Fernandez, Universitat Autònoma de Barcelona, Spain

Development and Evaluation of a Science Communication Training for Master Students in STEM

Julian Fick, TU Braunschweig, Germany; Noemi Kumpmann, University of Muenster, Germany; Friederike Hendriks, TU Braunschweig, Germany

PhD supervisors' and supervisees' perceptions on supervisory support

Henrika Anttila, University of Helsinki, Finland; Kirsi Pyhältö, University of Helsinki, Finland; Lotta Tikkanen, University of Helsinki, Finland

From findings to impact: Implications of current research for researcher-practitioner communication

Paul Howard-Jones, University of Bristol, United Kingdom; Bethany Woollacott, Loughborough University, United Kingdom; Samuel Sims, University College London, United Kingdom; Korbian Moeller, Loughborough University, United Kingdom; Hugo Lortie-Forgues, Loughborough University, United Kingdom; Matthew Inglis, Loughborough University, United Kingdom; Tim Jay, Loughborough University, United Kingdom; Camilla Gilmore, Loughborough University, United Kingdom; Colin Foster, Loughborough University, United Kingdom

How does interdisciplinary doctoral experience matter?

Auli Toom, University of Helsinki, Finland; Lotta Tikkanen, University of Helsinki, Finland; Henrika Anttila, University of Helsinki, Finland; Kirsi Pyhältö, University of Helsinki, Finland

Session A: 22

Time: 12:15-13:45

Location: UOM_R04

POSTER PRESENTATION: WRITING AND LITERACY DEVELOPMENT

Chair

Torhild Høydalsvik, Volda University College, Norway

Teaching writing in primary schools: the impact of curricula and orthographies. A systematic review

GIULIA VETTORI, University of Florence, Italy; Julie Dockrell, Institute of Education, United Kingdom

A genre-based interconnected reading and writing instruction: effects on writing skills

Moniek Vis, Rijksuniversiteit Groningen, Netherlands; Amos van Gelderen, University of Amsterdam / Rotterdam University of Applied Sciences, Netherlands; Kees de Gloppe, University of Groningen, Netherlands; Jacqueline van Kruiningen, Rotterdam University of Applied Sciences, Netherlands

Bilingual adults learning written words in English: orthographic influences of the first language.

Alexia Antzaka, Universidad Internacional de la Rioja-UNIR, Spain; Tianjiao Li, University of Bangor, United Kingdom; Mina Jevtović, Basque Center on Cognition, Brain and Language-University of the Basque Country, Spain; Clara Martin, Basque Center on Cognition, Brain, and Language- Basque Foundation for Science (Ikerbasque), Spain

Executive Functions in School Achievement: The Mediational Role of Learning-Related Behavior

carlotta rivella, Unige, Disfor, Italy; Paola Viterbori, UNIGE, Disfor, Italy

Assessing writing motivation: A systematic review of K-5 students' self-reports

Aline Alves-Wold, University of Stavanger, Norway; Bente Walgermo, University of Stavanger, Norway; Erin McTigue, University of Stavanger, Norway; Per Henning Uppstad, Norwegian Reading Center, Norway

Moroccan EFL University Instructors' Perceptions and Self-Reported Practices on Teaching Writing

Abderrahim Mamad, University of Szeged, Doctoral School of Education, Hungary; Tibor Vigh, University of Szeged, Hungary

Session A: 23

Time: 12:15-13:45

Location: UOM_R02

POSTER PRESENTATION: COGNITIVE DEVELOPMENT IN MATHEMATICS

Chair

Ka Lok Cheng, The University of Hong Kong, Hong Kong

Development of Creative Thinking via Fractions and Rhythm

Libby Azaryahu, The Academic College Levinsky Wingate, Israel; Orit Broza, Levinsky College of Education, Israel; Shai Cohen, Bar-Ilan University, Israel; Sara Hershkovitz, Levinsky College of Education, Israel; Esther Adi-Japha, Bar-Ilan University, Israel

Children's mathematical anxiety in primary school: The role of sex, age, and spatial ability

Wenke Möhring, University of Basel, Switzerland; Leonie Moll, University of Basel, Switzerland; Marta Szewczyk, The John Paul II Catholic University of Lublin, Poland; Magdalena Szubielska, The John Paul II Catholic University of Lublin, Poland

Eye-tracking for investigating students' local vs. global view of data

Saskia Schreiter, University of Education Heidelberg, Germany; Markus Vogel, Heidelberg University of Education, Germany

Individual strategies when comparing data sets with boxplots and their corresponding answer patterns

Martin Abt, University of Education Freiburg, Germany; Timo Leuders, University of Education Freiburg, Germany; Katharina Loibl, University of Education Freiburg, Germany; Frank Reinhold, University of Education Freiburg, Germany

Evidence that retrieval of multiplication facts requires inhibitory control

Joanne Eaves, Nottingham University, United Kingdom; Camilla Gilmore, Loughborough University, United Kingdom; Lucy Cragg, University of Nottingham, United Kingdom

Investigation of the Number Sense and Cognitive Flexibility Levels of Preschool Children Aged 5-6

Gürsu Asik, Bahcesehir University, Turkiye; Asli Gokdag, Ministry of Education - Turkey, Turkiye

Session A: 24

Time: 12:15-13:45

Location: UOM_R03

POSTER PRESENTATION: CRITICAL THINKING AND PROBLEM SOLVING**Chair**

Christopher Neil Prilop, Aarhus University, Denmark

Metacognition, creativity, and critical thinking reflect in PBL-based teaching performances

Rotem Maor, David Yellin College of Education, Israel; Nurit Paz-Baruch, Bar Ilan University, Israel; Niv Grunspan, Bar Ilan University, Israel; Alex Milman, Bar-Ilan University, Israel; Zemira Mevarech, Bar-Ilan University, Israel; Rotem Levi, Bar Ilan University, Israel; Sarit Shlomo, Bar Ilan University, Israel; Michal Zion, Bar-Ilan University, Israel

Personal Data Literacy Empowerment: A theoretical framework

Eleni Kyza, Cyprus University of Technology, Cyprus; Andria Agesilaou, Cyprus University of Technology, Cyprus

Effects and experiences from playing a game against disinformation in different classroom settings

Thomas Nygren, Uppsala University, Sweden; Carl-Anton Werner Axelsson, Uppsala University, Sweden; Jon Roozenbeek, University of Cambridge, United Kingdom; Sander van der Linden, University of Cambridge, United Kingdom

Using reflection to analyse student insights of critical & creative thinking skill development

Kelly Benati, Monash University, Australia; Jacqueline O'Toole, Monash University, Australia; Francesco Interrigi, Monash University, Australia; paul murphy, Monash University, Australia

Learning of working life competencies through collaborative problem-solving in higher education

Niina Impiö, University of Oulu, Finland; Signe Siklander, University of Oulu, Finland; Bhavna Rawat, University of Oulu, Finland

Do students in different courses of study think the same way in complex problem solving?

Gyöngyvér Molnár, University of Szeged, MTA-SZTE Digital Learning Technologies Research Group, Hungary; Hao Wu, University of Saint Joseph, Macao

Session A: 25

Time: 12:15-13:45

Location: UOM_R01

POSTER PRESENTATION: ACHIEVEMENT AND COGNITIVE SKILLS AND PROCESSES**Chair**

Catherine Gabelica, IESEG School of Management, France

Social, Dimensional, and Temporal Comparison Effects on Students' Self-Concepts: A Meta-Analysis

Fabian Wolff, Universität of Koblenz, Germany; Jens Möller, Kiel University, Germany

Academic Buoyancy and Coping: Are Buoyant Students Using More Effective Coping Strategies?

Tahrim Hussain, Liverpool John Moores University, United Kingdom; Dave Putwain, Liverpool John Moores University, United Kingdom; Martin Daumiller, University of Augsburg, Germany; Reinhard Pekrun, University of Essex, United Kingdom

Effects of Executive Function Training in Children and Adolescents: a Meta-Analysis

Sophie McMullin, Université du Québec à Montréal (UQAM), Canada; Steve Masson, Université du Québec à Montréal (UQAM), Canada

A preliminary study of the brain activation during science problem solving using MEG method

Fang-Ying Yang, National Taiwan Normal University, Taiwan

The Impact of Executive Functions on Physics Learning in Secondary School Students.

Konstantinos G Tsigaridis, University of Cambridge, Greece; Rui WANG, University of Cambridge, China; Jiayin Zheng, University of Cambridge, UK, United Kingdom; Michelle Ellefson, University of Cambridge, United Kingdom

Biology Education Levels and General Cognitive Ability Influence Conceptual Learning of Biology

Rui WANG, University of Cambridge, China; Konstantinos G Tsigaridis, University of Cambridge, Greece; Aidan Feeney, Queen's University Belfast, United Kingdom; Michelle Ellefson, University of Cambridge, United Kingdom

Session A: 26

Time: 12:15-13:45

Location: UOM_GYM

ROUNDTABLE: TEACHER PROFESSIONAL DEVELOPMENT**Chair**

Sorja Hahn, Darmstadt University of Applied Sciences, Germany

Longitudinal changes in teachers' attitudes towards innovations in implementation processes

Mareike Ehler, University of Muenster, Germany; Elmar Souvignier, University of Muenster, Germany

Experiential learning as a means for personal development and wellbeing in Slovak teachers

Lenka Janik Blaskova, University of Exeter, United Kingdom

Mapping the quality of teacher learning during lesson study: a digital ethnographic perspective

Katelijne Barbier, University of Antwerp, Belgium; Elke Struyf, University of Antwerp, Belgium; Ellen Vandervieren, University of Antwerp, Belgium; Vincent Donche, University of Antwerp, Belgium

'Stories to live by' in early career teachers' professional identity development

Gonny Schellings, Eindhoven University of Technology, Netherlands; Douwe Beijaard, Eindhoven University of Technology, Netherlands

Session A: 27

Time: 12:15-13:45

Location: UOM_A07

WORKSHOP: INSTRUMENTAL ENRICHMENT THINKING SKILLS PROGRAM**Instrumental Enrichment thinking skills program**

Alex Kozulin, Achva College and Feuerstein Institute, Israel

Session A: 28

Time: 12:15-13:45

Location: UOM_A11

ICT DEMONSTRATION: CALIBRATION OF AN ACADEMIC ANALYTICS TOOL FOR AT-RISK STUDENTS POLICY IN HIGHER EDUCATION**Calibration of an Academic Analytics Tool for At-Risk Students Policy in Higher Education**

David Corradi, University of Antwerp, Belgium

Session B: 1

Time: 15:00-16:30

Location: AUTH_CH

INVITED SYMPOSIUM: SYNTHESIZING COGNITIVE LOAD AND SELF-REGULATED LEARNING: FOUR YEARS OF EFG MRE RESEARCH**Chair**

Anique de Bruin, Maastricht University, Netherlands

Organiser

Julian Roelle, Ruhr University Bochum, Germany

Discussant

Matthias Nückles, University of Freiburg, Germany

The interplay between Cognitive Load, learners' resources and self-regulation

Tina Seufert, Ulm University, Germany; Verena Hamm, Ulm University, Germany

Focusing Learners on Comprehension- or Performance-Based Cues in Fostering Monitoring Accuracy

Julia Waldeyer, Ruhr-University Bochum, Germany; Tino Endres, University of Freiburg, Germany; Martine Baars, Erasmus University Rotterdam, Netherlands; Julian Roelle, Ruhr University Bochum, Germany; Alexander Renkl, University of Freiburg, Germany

Self-regulating Effort towards Desirable Difficulties: A Conceptual Framework

Anique de Bruin, Maastricht University, Netherlands; Felicitas Biber, Maastricht University, Netherlands; Luotong Hui, Imperial College London, United Kingdom; Erdem Onan, Maastricht University, Netherlands; Louise David, Maastricht University, Netherlands; Wisnu Wiradhany, Bina Nusantara University, Indonesia

Opting out leveraging strategic effort regulation

Yael Sidi, the Open University of Israel, Israel; Rakefet Ackerman, Technion - Israel Institute of Technology, Israel

ANNOTATIONS:

EFG INVITED SYMPOSIUM

Session B: 2

Time: 15:00-16:30

Location: UOM_CH

INVITED SYMPOSIUM: SOCIAL PRESENCE AND TELEPRESENCE IN ONLINE SOCIAL LEARNING**Chair**

Emmy Vrieling, Open University of the Netherlands, Netherlands

Organisers

Karel Kreijns, Open University of the Netherlands, Netherlands; Derya Orhan Göksün, Adiyaman University, Türkiye; Kamakshi Rajagopal, AE - Adapt & Enable, Belgium; Maartje Peters, Open University of the Netherlands, Netherlands; Joshua Weidlich, German Institute for International Educational Research (DIPF), Germany

Discussant

Armin Weinberger, Saarland University, Germany

Human interaction

Karel Kreijns, Open University of the Netherlands, Netherlands

Data driven regulation

Derya Orhan Göksün, Adiyaman University, Türkiye

Supporting technology

Kamakshi Rajagopal, AE - Adapt & Enable, Belgium; Maartje Peters, Open University of the Netherlands, Netherlands

Modes of communication

Joshua Weidlich, German Institute for International Educational Research (DIPF), Germany

ANNOTATIONS:
EFG INVITED SYMPOSIUM

Session B: 3

Time: 15:00-16:30

Location: AUTH_T002

SYMPOSIUM: APPLYING THE THEORY OF PLANNED BEHAVIOR IN INCLUSIVE EDUCATION**Chair**

Olli-Pekka Malinen, University of Helsinki, Finland

Organiser

Olli-Pekka Malinen, University of Helsinki, Finland

Discussant

Tuomo Virtanen, University of Jyväskylä, Finland

Differentiated teacher practices in secondary education: Planned or improvised behavior?

Elisa Kupers, University of Groningen, Netherlands; Anke de Boer, University of Groningen, Netherlands; Lisette de Jonge-Hoekstra, University of Groningen, Netherlands; Alexander Minnaert, University of Groningen, Netherlands

Sources of teacher self-efficacy in inclusive education within the framework of the TPB

Akie Yada, University of Jyväskylä, Finland; Olli-Pekka Malinen, University of Helsinki, Finland; İpek Gülsün, University of Jyväskylä, Finland; Hannu Savolainen, University of Eastern Finland, Finland

Finnish teachers' intentions and inclusive behaviours via the theory of planned behaviour

İpek Gülsün, University of Jyväskylä, Finland; Hannu Savolainen, University of Eastern Finland, Finland; Olli-Pekka Malinen, University of Helsinki, Finland; Akie Yada, University of Jyväskylä, Finland

Prerequisites for primary school teachers' practices in the inclusive classroom

Marwin Felix Loeper, Paderborn University, Germany; Gamze Görel, Paderborn University, Germany; Frank Hellmich, Paderborn University, Germany

Session B: 4

Time: 15:00-16:30

Location: UOM_CR

SYMPOSIUM: DESIGNING EFFECTIVE DIGITAL LEARNING ENVIRONMENTS – REVIEWING THE EVIDENCE**Chair**

Ingo Kollar, University of Augsburg, Germany

Organisers

Andreas Gegenfurtner, University of Augsburg, Germany; Ingo Kollar, University of Augsburg, Germany

Discussant

James Slotta, OISE, University of Toronto, Canada

Assessing Web-based Inquiry Learning Environments Using Knowledge Integration Pedagogy

Sarah Bichler, Ludwig-Maximilians-Universität (LMU), Germany; Marcia Linn, University of California-Berkeley, United States; Libby Gerard, University of Berkeley, United States

Six evidence-informed tips on how to optimize learning from instructional videos

Vincent Hoogerheide, Utrecht University, Netherlands; Stoo Sepp, University of New England, Australia, Australia

Designing Effective Immersive Virtual Learning Environments

Guido Makransky, University of Copenhagen, Denmark; Gustav Petersen, University of Copenhagen, Denmark

Effectiveness of Flipped Classrooms

Marlene Wagner, University for Continuing Education Krems (Danube University Krems), Austria; Andreas Gegenfurtner, University of Augsburg, Germany; Detlef Urhahne, University of Passau, Germany

Session B: 5

Time: 15:00-16:30

Location: UOM_A02

SYMPOSIUM: NEW INSIGHTS ON THE RELATION BETWEEN CHILDREN'S MATHEMATICS ATTITUDES AND THEIR PERFORMANCE**Chair**

Jo Van Hoof, University of Turku, Finland

Organisers

Jo Van Hoof, University of Turku, Finland; Hilma Halme, University of Turku, Department of Teacher Education, Finland

Discussant

Reinhard Pekrun, University of Essex, United Kingdom

Doing Well and Thinking Positively: The Unbalanced Relation Between Math Attitudes and Achievement

Michael Slipenkyj, Georgetown University, United States; Tsz Tan Lau, The University of Western Ontario, Canada; Ian Lyons, Georgetown University, United States; Daniel Ansari, University of Western Ontario, Canada

Developmental relations between mathematics anxiety, number processing and arithmetic fluency

Johan Korhonen, Åbo Akademi University, Finland; Anna Widlund, Åbo Akademi University, Finland

The association between parents' math anxiety and children's math anxiety and achievement

Elien Bellon, KU Leuven, Belgium; Kiran Vanbinst, KU Leuven, Belgium; Bert De Smedt, KU Leuven, Belgium; Ann Dowker, University of Oxford, United Kingdom

Trait and state mathematics anxiety relate to performance across tasks in primary school

Hilma Halme, University of Turku, Department of Teacher Education, Finland; Kelly Trezise, University of Chicago, United States; Minna Hannula-Sormunen, University of Turku, Finland; Jo Van Hoof, University of Turku, Finland; Jake McMullen, University of Turku, Finland

Session B: 6

Time: 15:00-16:30

Location: AUTH_T102

SYMPOSIUM: KNOWLEDGE ABOUT LANGUAGE AND THE TEACHING OF L1 WRITING: INTERNATIONAL PERSPECTIVES**Chair**

Debra Myhill, University of Exeter, United Kingdom

Organiser

Annabel Watson, University of Exeter, United Kingdom

Discussant

Xavier Fontich, Autonomous University of Barcelona, Spain

Young pupils' knowledge about language expressed through writing and in dialogues

Mari Nygård, NTNU, Norway; Randi Solheim, Faculty of Social and Educational Sciences, Norway

What transfers and how? Examining how contextualised grammar teaching influences students' writing.

Annabel Watson, University of Exeter, United Kingdom

Metalinguistic modelling in writing instruction: bridging learning about text and individual writing

Ruth Newman, University of Exeter, United Kingdom

L1 student teachers' processing of different linguistic arguments in grammatical discussions

Jimmy van Rijt, Tilburg University, Netherlands

Session B: 7

Time: 15:00-16:30

Location: UOM_A13

SYMPOSIUM: POWERFUL LEARNING ENVIRONMENTS FOR 4-7-YEAR-OLDS: INTERACTIVE PICTURE BOOK READING**Chair**

Joke Torbeyns, KU Leuven, Belgium

Organisers

Joke Torbeyns, KU Leuven, Belgium; Hilde Van Keer, Ghent University, Belgium

Discussant

Maria T. Sikkema-de Jong, Leiden University, Netherlands

Enhancing problem-solving skills in preschool through interactive picture book reading

Joris Van Elsen, University of Antwerp, Belgium; Leen Catrysse, Open Universiteit, Department of Online Learning and Instruction, Belgium; Sven De Maeyer, Antwerp University, Belgium

The Effects of a Quantitative Mathematical Language Intervention on Number Line Skills and SFON

David Purpura, Purdue University, United States; Connor D. O'Rear, Purdue University, United States; Alexa Ellis, Purdue University, United States; Lauren Westerberg, Purdue University, United States; Mackenna Vander Tuin, The University of Texas, United States; Patrick Ehrman, Purdue University, United States; Yemimah A. King, Spelman College, United States

What's in a word: impact of interactive book reading on 1st-graders' expressive target vocabulary

Silke Vanparys, Ghent University, Belgium; Hilde Van Keer, Ghent University, Belgium

The effect of interactive picture book reading on language competence in early childhood education

Chiel van der Veen, Vrije Universiteit Amsterdam, Netherlands; Shariisse van Driel, Vrije Universiteit Amsterdam, Netherlands; Femke van der Wilt, VU Amsterdam, Netherlands

Session B: 8

Time: 15:00-16:30

Location: AUTH_TE2

SYMPOSIUM: STUDYING PROFESSIONAL LEARNING COMMUNITIES OF PRE-SERVICE TEACHERS, PRINCIPALS & UNIVERSITY FACULTY**Chair**

Peter Theurl, University of Teacher Education Vorarlberg, Austria

Organiser

Loucas Louca, European University Cyprus, Cyprus

Discussant

SOFIA AVGITIDOU, Aristotle University of Thessaloniki, Greece

An Investigation of the Introduction Faculty Professional Learning Communities in Higher Education

Loucas Louca, European University Cyprus, Cyprus; Theopisti Skoulia, European University - Cyprus, Cyprus; Marios Vryonides, European University - Cyprus, Cyprus

Professional learning communities extended as a method for leadership development

Katja Kansteiner, Pädagogische Hochschule Weingarten, Germany

Professional Learning Communities of Pre-Service Teachers in Internship

Peter Theurl, University of Teacher Education Vorarlberg, Austria; Eva Frick, University of Education Vorarlberg, Austria; Elvira Barrios, Universidad de Málaga, Spain; Carmen Sanchidrián, Universidad de Malaga, Spain

The importance of structure and action plans in a professional learning community for principals

Anne Berit Emstad, Norwegian University of Science and Technology (NTNU), Norway; Bård Knutsen, NTNU - Norwegian University of Science and Technology, Norway; Morten Krogstad Strand, Kattem skole, Trondheim, Norway

Session B: 9

Time: 15:00-16:30

Location: AUTH_DC2

SYMPOSIUM: EFFECTS OF THE COVID-19 PANDEMIC ON STUDENT ACHIEVEMENT**Chair**

Natalie Foerster, University of Münster, Germany

Organiser

Natalie Foerster, University of Münster, Germany

Discussant

Andreas Frey, Goethe-Universität Frankfurt, Germany

Effects of the COVID-19 Pandemic on Reading Performance of Second Grade Children in Germany

Natalie Foerster, University of Münster, Germany; Boris Forthmann, University of Münster, Germany; Mitja D. Back, University of Münster, Germany; Elmar Souvignier, University of Muenster, Germany

Third Graders Mathematic Growth amid the Second Corona School Year in Austria

Christoph Helm, Johannes Kepler University Linz, Austria; Christoph Weber, University of Education Upper Austria, Austria; David Kemethofer, University of Education Upper Austria, Austria

Effects of the Covid-19 pandemic on the school performance of Swiss students

Valentin Unger, St.Gallen University of Teacher Education, Switzerland; Fabian Grünig, St.Gallen University of Teacher Education, Switzerland; Michael Kickmeier-Rust, University of Teacher Education, Switzerland; Jan Hochweber, St. Gallen University of Teacher Education, Switzerland; Nicolas Hübner, University of Tübingen, Germany; Christoph Helm, Johannes Kepler University Linz, Austria

Students' learning loss over the course of the COVID-19 pandemic – A Meta-Analysis

Andrea Wisenöcker, Johannes Kepler University Linz, Austria; Christoph Helm, Johannes Kepler University Linz, Austria; Cornelia S. Große, Johannes Kepler University Linz, Austria, Austria

Session B: 10

Time: 15:00-16:30

Location: AUTH_DC1

SINGLE PAPER: LEARNING AND DEVELOPMENTAL DIFFICULTIES: SCREENING AND ASSESSMENT**Chair**

Honghong Bai, Tsinghua University, China

Through the student's eyes: Perspective taking in student problem behavior

Hinke Endedijk, Leiden University, Netherlands; Tim Mainhard, Leiden University, Netherlands

Arithmetic development from Grade 1 to 3 – The role of domain-specific and domain-general predictors

Riikka Mononen, University of Oulu, Finland; Johan Korhonen, Åbo Akademi University, Finland; Markku Niemivirta, University of Eastern Finland, Finland

Diagnostic assessment of special educational needs in the field of learning disorders

Ann-Kathrin Hennes, University of Cologne, Germany; Lisa Dortants, Universität zu Köln/ University of Cologne, Germany; Julie Philippek, Universität zu Köln/ University of Cologne, Germany; Alfred Schabmann, University of Cologne, Germany; Barbara Schmidt, University of Cologne, Germany

A meta-analysis of teacher screening and progress monitoring assessments: Preliminary findings

Serap Keles, Knowledge Centre for Education, University of Stavanger, Norway; Dieuwert ten Braak, University of Stavanger, Norway; Åste Marie Mjelve Hagen, University of Oslo, Norway; Monica Melby-Lervåg, University of Oslo, Norway

Session B: 11

Time: 15:00-16:30

Location: UOM_A04

SINGLE PAPER: ACHIEVEMENT IN MATHEMATICS: MOTIVATIONAL BELIEFS, EMOTIONS AND EFFORT**Chair**

Despoina Georgiou, Utrecht University, Netherlands

Beliefs and mathematics achievements : association with attitudes and motivation

Achmad Hidayatullah, University of Szeged, Doctoral School of Education, Indonesia; Csaba Csikos, University of Szeged, MTA-SZTE Metacognition Research Group, Hungary

Profiles of control, value and achievement emotions in primary school mathematics lessons.

Dave Putwain, Liverpool John Moores University, United Kingdom; Wendy Symes, University of Potsdam, Germany; Stephanie Lichtenfeld, Universität Hamburg, Germany

State-Trait Analyses of STEM Students' Math-Related Motivations In Low-Stakes Achievement Settings

Daria Katharina Benden, University of Bonn, Germany; Fani Lauermann, University of Bonn, Germany

The Role of Effort in Students' Mathematics Development: Investigating its Predictors and Outcomes

Robin Nagy, UNSW, Australia; Andrew Martin, University of New South Wales, Australia; Rebecca Collie, University of New South Wales, Australia

Session B: 12

Time: 15:00-16:30

Location: UOM_A08

SINGLE PAPER: EDUCATIONAL EFFECTIVENESS AND SCHOOL IMPROVEMENT**Chair**

Inmaculada Fajardo, Department of Developmental and Educational Psychology/Reading Research Unit, Spain

School improvement capacity in average-performing schools

Beat Rechsteiner, University of Zurich, Switzerland; Lisa Maria Schaefer, Johannes Gutenberg University of Mainz, Germany; Claudia Marusic-Würscher, Zurich University of Teacher Education, Switzerland; Katharina Maag Merki, University of Zurich, Switzerland; Andrea Wullschlegler, University of Applied Sciences and Arts Northwestern Switzerland PH (FHNW), Switzerland

A Model of Complex Data Analysis for Improving Student Achievements

Pavels Pestovs, University of Latvia, Latvia; Dace Namsone, University of Latvia, Latvia

Research as an Institutional Practice: Problems and Suggested Improvements

Mark White, University of Oslo, Norway

Navigating the invisible boundary, factors that support the transition to secondary school.

Emma Cunningham, University of Waikato, New Zealand

ANNOTATIONS:

PLEASE NOTE THAT THIS SESSION ROOM HAS CHANGED FROM AUTH_TE1 TO UOM_A08.

Session B: 13

Time: 15:00-16:30

Location: UOM_A03

SINGLE PAPER: VIDEO-BASED LEARNING AND TEACHER PROFESSIONAL VISION**Chair**

Jean-Luc Patry, Paris-Lodron University Salzburg, Austria

Signaling, self-explanations, and situational interest in preservice professional vision training

Meg Farrell, Technische Universität München, Germany; Monika Martin, University of Education Freiburg, Germany; Ricardo Böheim, Technical University of Munich, Germany; Alexander Renkl, University of Freiburg, Germany; Werner Rieß, PH Freiburg, Germany; Karen Könings, Maastricht University, Netherlands; Jeroen Van Merriënboer, Maastricht University, Netherlands; Tina Seidel, Technische Universität München, Germany

Video-based intervention to foster pre-service teachers' professional vision of feedback

Anna Holstein, Leuphana University Lüneburg, Germany; Christopher Neil Prilop, Aarhus University, Denmark; Kira Elena Weber, Kiel University, Christian Albrecht Universität zu Kiel, Leibniz Institute for Science and Mathematics Education, Germany; Marc Kleinknecht, Leuphana University Lüneburg, Germany

Potentials of different perspectives of classroom videos for fostering teachers' professional vision

Sara Mahler, PH FHNW Switzerland, Switzerland; Kerstin Baeuerlein, University of Applied Sciences and Arts Northwestern Switzerland, Switzerland; Corinne Wyss, FHNW School of Education, Switzerland

Which explainer video is "the one to choose"? Insights into how teachers select explainer videos

Felicitas Licht, University of Giessen, Germany; Marie-Christin Krebs, University of Giessen, Germany; Alexander Eitel, University of Giessen, Germany

Session B: 14

Time: 15:00-16:30

Location: UOM_R08

SINGLE PAPER: DIFFERENT ASPECTS OF INCLUSIVE EDUCATION**Chair**

Kim van Broekhoven, Erasmus University Rotterdam, Netherlands

The effect on achievement of an orientation track for first-year students: a longitudinal study

Dorien Jansen, Hogeschool PXL, Belgium; Philippe Haldermans, Hogeschool PXL, Belgium; Heidi Croes, Hogeschool PXL, Belgium

Promoting Access through Affordability: A Systematic Review of Open Educational Resources

Amber Mullens, University of Central Florida, United States; BOBBY HOFFMAN, University of Central Florida, United States

How do students with the diagnosis autism specter disorder master higher education

Liv Håberg, Volda University College, Norway; Kari Rygg, Inviro, Norway

Examination experiences of university students with disabilities before and during the pandemic

Margaret Bearman, Deakin University, Australia; Joanna Tai, Deakin University, Australia; Paige Mahoney, Deakin University, Australia; Rola Ajjawi, Deakin University, Australia; Jo Dargusch, Central Queensland University, Australia; Mary Dracup, Deakin University, Australia; Lois Harris, Central Queensland University, Australia

Session B: 15

Time: 15:00-16:30

Location: AUTH_DC3

SINGLE PAPER: FOSTERING SELF-REGULATED LEARNING: INDIVIDUAL AND INSTRUCTIONAL FACTORS**Chair**

Jose Hanham, Western Sydney University, Australia

Examining the psychometric power of the SRL Profile and Self-diagnostic scale

Allyson Hadwin, University of Victoria, Canada; Ramin Rostampour, University of Victoria, Canada; Michelle Bahena-Olivares, University of Victoria, Canada; Philip Winne, Simon Fraser University, Canada

Fostering Self-Regulated Learning with a Learning Diary: Success Factors

Thomas Martens, Medical School Hamburg, Germany; Diana Pistoll, Medical School Hamburg, Germany

The impact of SRL instruction in task understanding, academic challenges, and performance

Michelle Bahena, University of Victoria, Canada; Allyson Hadwin, University of Victoria, Canada; Ramin Rostampour, University of Victoria, Canada; Muqing Nie, University of Victoria, Canada

Self-regulated learning of teachers and its connections to the competencies of their students

Yves Karlen, University of Zurich, Switzerland; Silke Hertel, Ruprecht-Karls-Universität Heidelberg, Germany; Johannes Jud, University of Zurich, Switzerland; Carmen Nadja Hirt, University of Applied Sciences and Arts Northwestern Switzerland (FHNW), Switzerland

Session B: 16

Time: 15:00-16:30

Location: AUTH_T202

SINGLE PAPER: ASSESSMENT METHODS IN VOCATIONAL EDUCATION**Chair**

Cheuk Ming Ho, The Education University of Hong Kong, Hong Kong

Entrepreneurship Competence in VET: results from Italy

Daniele Morselli, Free University of Bolzano, Italy

Exploring VET student, workplace and school tutor viewing and evaluation of work practice

Sietse Brands, University of Twente, Netherlands; Bas Kollöffel, University of Twente, Netherlands; Elwin Savelsbergh, Universiteit Utrecht / Hogeschool Utrecht, Netherlands; Maaïke Endedijk, University of Twente, Netherlands

Digital measurement of hands-on skills? Validation of a computer-based automotive repair test

Stefan Hartmann, Ludwigsburg University of Education, Germany; Emre Güzel, Ludwigsburg University of Education, Germany; Tobias Gschwendtner, Ludwigsburg University of Education, Germany

Same, but different? Digital Transformation of Vocational Schools in Germany and Switzerland

Andreas Harder, University of Konstanz, Germany; Stephan Schumann, University of Constance, Germany; Serge Imboden, HES-SO Valais-Wallis, Switzerland

Session B: 17

Time: 15:00-16:30

Location: UOM_R09

SINGLE PAPER: STUDENT SELF-BELIEFS AND SELF-REGULATED LEARNING**Chair**

Dorit Bosse, University of Kassel, Institute of Educational Science, Germany

How do Variables Relate to K12-Students Self-Beliefs? A Second-Order Meta-Analysis

Thorben Jansen, Leibniz-Institut für die Pädagogik der Naturwissenschaften und Mathematik, Germany; Jennifer Meyer, Leibniz Institute for Science and Mathematics Education (IPN), Germany; John Hattie, The University of Melbourne, Australia; Jens Möller, Institute of Psychology of Learning and Instruction, Kiel University, Germany

Influencing procrastination – results from a course

Henna Asikainen, University of Helsinki, Finland; Telle Hailikari, Häme University of Applied Sciences, Finland; Nina Katajavuori, University of Helsinki, Finland

“I have a sense of accomplishment”: An Investigation into Chinese International Student Engagement

- Dangi, Newcastle University, United Kingdom

Session B: 18

Time: 15:00-16:30

Location: UOM_R02

POSTER PRESENTATION: MULTIMEDIA LEARNING**Chair**

Adriaan Vervoort, UHasselt, Belgium

Can Video Testimonials Augment the Refutation Effect in Climate Change Misconceptions?

Leen Catrysse, Open Universiteit, Department of Online Learning and Instruction, Belgium; Marcel 't Lam, Open Universiteit, Netherlands; Dorothy Duchatelet, Open Universiteit, Department of Online Learning and Instruction, Netherlands; Halszka Maria Jarodzka, Open Universiteit, Department of Online Learning and Instruction, Netherlands

Evidence-based design guidelines for multimedia testing

Andrienne Kerckhoffs, Open Universiteit, Department of Online Learning and Instruction, Netherlands; José Janssen, Open University of the Netherlands, Netherlands; Ron Pat-El, Open University, Netherlands; Halszka Maria Jarodzka, Open Universiteit, Department of Online Learning and Instruction, Netherlands

Investigating Content-Relevant Background Color as Retrieval Cue in Multimedia Learning

Felix Krieglstein, Chemnitz University of Technology, Germany; Felicia Meusel, Chemnitz University of Technology, Germany; Nadine Scheller, Chemnitz University of Technology, Germany

Session B: 19

Time: 15:00-16:30

Location: UOM_R03

POSTER PRESENTATION: GOAL ORIENTATIONS IN MOTIVATION AND EMOTION RESEARCH**Chair**

Mikko Tiilikainen, University of Turku, Finland

The Role of Emotions in Goal Revision and Performance: A Computational Modeling Approach

Wy Ming Lin, University of Tübingen, Germany; Lily FitzGibbon, University of Stirling, United Kingdom; Maria Theobald, DIPF | Leibniz Institute for Research and Information in Education, Germany; Jasmin Breitwieser, DIPF | Leibniz Institute for Research and Information in Education, Germany; Garvin Brod, DIPF | Leibniz Institute for Research and Information in Education, Germany; Kou Murayama, University of Tübingen, Germany; Michiko Sakaki, University of Tübingen, Germany

Effects of Performance Goals and Self-Efficacy on Cheating in an Academic Test

Melissa Özsoy, University of Augsburg, Germany; Tanja Fritz, Augsburg University, Germany; Martin Daumiller, Augsburg University, Germany

Intentions to study secondary science: A latent profile analysis from a multiple goals perspective

Nathan Berger, Western Sydney University, Australia; Erin Mackenzie, Western Sydney University, Australia; Kathryn Holmes, Western Sydney University, Australia; Jennifer Archer, The University of Newcastle, Australia

Motivation During the PhD: Development of Achievement Goals Depending on Contextual Factors

Raven Rinas, Augsburg University, Germany; Martin Daumiller, University of Augsburg, Germany; Stefan Janke, University of Mannheim, Germany; Oliver Dickhaeuser, University of Mannheim, Germany; Markus Dresel, University of Augsburg, Germany

Thought patterns of students with a positive or negative self-evaluation bias of competence

Anne-Laure de Place, Université Paris 8 - Vincennes - Saint Denis, France; Laurent Lima, Université Grenoble Alpes, France; Fanny Verkamp, Université Toulouse - Jean Jaurès, France; Pascal Pansu, Université Grenoble Alpes, France

Conceptualizing Prosocial Motivation: Contributing to benefit others in Collaborative Group Contexts

Toni Rogat, Purdue University, United States

Session B: 20

Time: 15:00-16:30

Location: UOM_R01

POSTER PRESENTATION: WELL-BEING AND RESILIENCE

Chair

Fotini Bonoti, University of Thessaly, Greece

Looking for talent: discover and stimulate talent-awareness in preschool with a digital portfolio

Saar Steverlinck, Hogeschool PXL, Belgium; Hanne Rosius, Hogeschool PXL, Belgium; Dorien Jansen, Hogeschool PXL, Belgium

Measuring School's Contribution to Students' Mental Health: Validation of a New Scale

Christian Brandmo, University of Oslo, Norway; Hanne Nissen Bjørnsen, Norwegian University of Science and Technology (NTNU), Norway; Gunnar Bjørnebekk, Department of Special Needs Education, Norway

Testing the effectiveness of a physical activity program on adolescent resiliency

yuhan hu, Erasmus University Rotterdam, Netherlands; Brian Godor, Avans University of Applied Sciences, Netherlands; Guus Smeets, Erasmus University Rotterdam, Netherlands; Ruth Van der Hallen, Erasmus University Rotterdam, Netherlands

Meet Them Where They Are: An Investigation of Social Media and Stress in College Students

Suzanne Lindt, Midwestern State University, United States; Stacia Miller, Midwestern State University, United States; Christina Janise McIntyre, Midwestern State University, United States

What works best? 3 years of designing & piloting a stress management and resilience intervention

Natalie Peters, TU Dresden, Faculty of Business and Economics, Chair of Business Education and Management Training, Germany

Relationships between School-related outcomes and general variables: A tentative comprehensive model

Clément PERRIN, Université Grenoble Alpes, France; Pascal Bressoux, Université Grenoble Alpes, France; Pierre De Oliveira, Laboratoire Psy-DREPI, Université de Bourgogne-Franche-Comté, France

Session B: 21

Time: 15:00-16:30

Location: UOM_R04

POSTER PRESENTATION: ACHIEVEMENT AND MATHEMATICS IN EDUCATIONAL SETTINGS

Chair

Sara Caviola, University of Padova, Italy

Can early childhood education in Kosovo contribute to the reduction of educational inequality?

Saranda Shabanhaxhaj, University of Graz, Institute of Education Research and Teacher Education, Austria; Heike Wendt, University of Graz, Austria

Electrophysiological correlates of processing numerical order and their association to arithmetic

Stephan Vogel, University of Graz, Austria; Clemens Brunner, University of Graz, Austria; Roland Grabner, University of Graz, Austria

Reading Metacognition and Mathematical Literacy: A Cross-Country Comparison of Taiwan and Germany

Su-Wei Lin, National University of Tainan, Taiwan; Anselm Strohmaier, Technical University of Munich, Germany; Pei-Ming Chiang, National University of Tainan, Taiwan

Numerical Competencies in Preschoolers with Language Difficulties

Kirsten Schuchardt, University Hildesheim, Germany; Claudia Maehler, University of Hildesheim, Germany

Mapping across different types of representations in preschool

Josetxu Orrantia, University of Salamanca, Spain; Laura Matilla, University of Salamanca, Spain; Rosario Sánchez, University of Salamanca, Spain; Verónica Carretón Jareño, University of Salamanca, Spain; David Munez, National Institute of Education / Nanyang Technological University, Singapore

Finger numeral recognition predicts arithmetic performance in primary school

Josetxu Orrantia, University of Salamanca, Spain; Rosario Sánchez, University of Salamanca, Spain; Laura Matilla, University of Salamanca, Spain; Verónica Carretón Jareño, University of Salamanca, Spain; David Munez, National Institute of Education / Nanyang Technological University, Singapore

Session B: 22

Time: 15:00-16:30

Location: UOM_GYM

ROUNDTABLE: ENVIRONMENTAL EDUCATION

Chair

Jordi Casteleyn, Antwerp University, Belgium

Words Matter: Public Perceptions of Climate Change Terminology

Laurel Kruke, University of Southern California, United States; Gale Sinatra, University of Southern California, United States; Wandí Bruine de Bruin, University of Southern California, United States; Norbert Schwarz, University of Southern California, United States

There is no planet B, so what now? Measuring climate literacy in teenagers

Monika Martin, University of Education Freiburg, Germany; Magdalena Stadler, University of Education Freiburg, Germany; Josef Künstling, University of Education Freiburg, Germany; Werner Rieß, PH Freiburg, Germany

Session B: 23

Time: 15:00-16:30

Location: UOM_A10

WORKSHOP: CONTRIBUTING TO THE INNOVATIVE CULTURE: CREATING A PROGRESSION-GAME GAMIFIED INSTRUCTIONAL DESIGN**Contributing to the innovative culture: Creating a progression-game gamified instructional design**

Emese Boksay-Pap, Pázmány Péter Catholic University, The Institute of International Studies & Political Science, Hungary

ANNOTATIONS:

PLEASE BRING YOUR OWN DEVICE (PREFERABLY LAPTOP OR TABLET) TO TAKE PART IN THIS WORKSHOP.

Session B: 24

Time: 15:00-16:30

Location: UOM_R05

WORKSHOP: CREATING OPPORTUNITIES FOR SELF-REGULATED LEARNING: SETTING UP PARTICIPATORY DESIGN-RESEARCH STUDIES.**Creating opportunities for self-regulated learning: setting up participatory design-research studies.**

H.J.M. Stokhof, HAN University of Applied Sciences, Netherlands; Jeroen van der Linden, HAN University of Applied Sciences / Maastricht University, Netherlands

ANNOTATIONS:

THIS SESSION WILL TAKE PLACE IN UOM_W INSTEAD OF UOM_R05.

Session B: 25

Time: 15:00-16:30

Location: UOM_A11

ICT DEMONSTRATION: CLOSING THE FEEDBACK LOOP - A MOODLE PLUGIN FOR (SEMI-)AUTOMATED FEEDBACK**Closing the Feedback Loop - A Moodle Plugin for (Semi-)automated Feedback**

Ioana Jivet, Goethe University Frankfurt & DIPF, Germany; Tornike Giorgashvili, Goethe-Universität Frankfurt am Main, Germany; Hendrik Drachler, Goethe University Frankfurt, Germany

Session B: 26

Time: 15:00-16:30

Location: UOM_A07

ICT DEMONSTRATION: MICROSOFTS' IMMERSIVE READER AS TRANSLANGUAGE-ENABLING TECHNOLOGY IN SECOND LANGUAGE ACQUISITION.**Microsofts' Immersive Reader as translanguaging-enabling technology in second language acquisition.**

Sonja Nygaard-Joki, Oestfold University College, Norway; Stine Brynildsen, Østfold University College, Norway

Session C: 1

Time: 17:15-18:45

Location: AUTH_CH

INVITED SYMPOSIUM: RAISING AWARENESS ABOUT ONLINE READERS' AWARENESS: DIGITAL COMPETENCE IN MULTIPLE-TEXT CONTEXTS**Chair**

Christian Tarchi, University of Florence, Italy

Discussant

Elena Florit, University of Verona, Italy

Eight-year-olds seeking information with Ipads: dimensions of reading competence

Eva Brante, Malmö University, Germany; Robert Wallden, Malmö University, Sweden; Kim Ridell, Malmö University, Sweden

Successful Evaluation of Online Texts Requires Skills to Confirm and Question the Credibility

Carita Kiili, Tampere University, Finland; Eija Räikkönen, University of Jyväskylä, Finland; Ivar Braten, University of Oslo, Norway; Helge Stromso, University of Oslo, Norway; Michelle Schira Hagerman, University of Ottawa, Canada

Readers' awareness in the use of intertextual strategies when reading multiple texts

Lidia Casado Ledesma, University of Florence, Italy; Christian Tarchi, University of Florence, Italy

Teachers' Perceptions of Multiple-Text Integration: Instructional Challenges and Practices

Liron Primor Grunfeld, Hemdat Academic College, Israel; Sarit Barzilai, University of Haifa, Faculty of Education, Israel

ANNOTATIONS:

INVITED SYMPOSIUM OF THE ITALIAN PSYCHOLOGICAL ASSOCIATION (SECTION DEVELOPMENTAL AND EDUCATIONAL PSYCHOLOGY)

Session C: 2

Time: 17:15-18:45

Location: UOM_CH

INVITED SYMPOSIUM: EDUCATING THE DEVELOPING MIND: AN OVERARCHING THEORY FOR DEVELOPMENT AND LEARNING**Chair**

ANDREAS DEMETRIOU, University of Nicosia and Cyprus Academy of Sciences, Letters, and Arts, Cyprus

Organiser

ANDREAS DEMETRIOU, University of Nicosia and Cyprus Academy of Sciences, Letters, and Arts, Cyprus

Discussant

Roger Saljo, University of Gothenburg, Sweden

A comprehensive theory of intellectual development and its application to education

ANDREAS DEMETRIOU, University of Nicosia and Cyprus Academy of Sciences, Letters, and Arts, Cyprus

A developmental approach to problem solving

Samuel Greiff, University of Luxembourg, Luxembourg

Contextual frames for development and learning

Mari-Paullina Vainikainen, Tampere University, Finland

A new framework of understanding and educating individuals with developmental disorders

George Spanoudis, University of Cyprus, Cyprus

ANNOTATIONS:

INVITED SYMPOSIUM OF THE CYPRUS ACADEMY OF SCIENCES, LETTERS, AND ARTS

Session C: 3

Time: 17:15-18:45

Location: UOM_A13

SYMPOSIUM: SUSTAINABLE LEARNING IN DIGITAL FUTURES: ETHICS AND VALUES IN DATA-DRIVEN EDUCATIONAL PRACTICES**Chair**

Giulia Messina Dahlberg, University of Gothenburg, Sweden

Organisers

Ylva Lindberg, Jönköping University, Sweden; Teresa Cerratto-Pargman, Stockholm University, Sweden

Discussant

Anders Buch, VIA University College, Denmark

Visualizing data packets to reveal data infrastructures and data assets: The InfraReveal Tool

Marie Utterberg Modén, Department of Applied IT, University of Gothenburg, Sweden; Svea Kiesewetter, University of Gothenburg, Sweden; Annika Bergviken-Rensfeldt, Department of Applied Information Technology, University of Gothenburg, Sweden, Sweden; Thomas Hillman, Department of Applied Information Technology, University of Gothenburg, Sweden, Sweden

Ethics of AI-driven automated systems for assessment

Alexandra Farazouli, Stockholm University, Sweden

Focusing Bias Analyses: Responsible Learning Analytics in the Context of STEM Identity Development

Adrian Grimm, IPN - Leibniz Institute for Science and Mathematics Education, Germany; Anneke Steegh, IPN-Leibniz Institute for Science and Mathematics Education, Olshausenstraße 62, D-24118 Kiel, Germany, Germany; Marcus Kubsch, IPN-Leibniz Institute for Science and Mathematics Education, Olshausenstraße 62, D-24118 Kiel, Germany, Germany; Knut Neumann, IPN-Leibniz Institute for Science and Mathematics Education, Olshausenstraße 62, D-24118 Kiel, Germany, Germany

CANCELLED: Data-imaginaries Tacit Ethics in AI-Research (...)

Joakim Juhl, TU Munich, Germany

Session C: 4

Time: 17:15-18:45

Location: UOM_A02

SYMPOSIUM: WHAT DO WE GET IF WE MEASURE TEACHING QUALITY? VALIDITY AND STABILITY OF DIFFERENT APPROACHES**Chair**

Sebastian Röhl, University of Tübingen, Germany

Organiser

Sebastian Röhl, University of Tübingen, Germany

Discussant

Mark White, University of Oslo, Norway

Teaching quality: What has changed in the last twenty years?

Wida Wemmer-Rogh, University of Zurich, Switzerland; Leonie Gossner, University of Zurich, Switzerland; Patrick Schreyer, University of Kassel, Germany; Urs W. Grob, University of Zurich, Switzerland; Eckhard Klieme, German Institute for International Educational Research (DIPF), Germany; Anna-Katharina Praetorius, University of Zurich, Switzerland

Effects of Student Ratings of Teaching Quality on Learning Achievement – A Meta-analysis

Sebastian Röhl, University of Tübingen, Germany; Ann-Kathrin Jaekel, University of Tübingen, Germany

Changing Teaching or Changing Perspectives? Response Shifts in Student Ratings of Teaching Quality

Jonathan Schweig, RAND Corporation, United States; Jose Felipe Martinez, University of California, United States

Teaching Quality in Dutch Schools from the Perspectives of School Inspectors, Students, and Teachers

Hannah Bijlsma, University of Twente, Netherlands; Adrie Visscher, Univ. of Twente, Netherlands; Cees Glas, University of Twente, Netherlands

Session C: 5

Time: 17:15-18:45

Location: UOM_A03

SYMPOSIUM: FACTORS SUPPORTING SUCCESSFUL TRANSITION FROM HIGHER EDUCATION TO WORKING LIFE**Chair**

Heidi Hyytinen, University of Helsinki, Finland

Discussant

Maaïke Endedijk, University of Twente, Netherlands

Transition to working life - which employability factors contribute graduates' early career success?

Tarja Tuononen, University of Helsinki, Finland; Heidi Hyytinen, University of Helsinki, Finland

Discipline-specific Profiles for Learning Opportunities of Generic Skills in Higher Education

Katharina Lohberger, Justus Liebig University Giessen, Germany; Edith Braun, Justus-Liebig-University Giessen, Germany

How does coaching facilitate students' education-to-work transition?

Niels van der Baan, Maastricht University School of Business and Economics, Netherlands; Simon Beusaert, Maastricht University, Netherlands; Wim Gijsselaers, Maastricht University School of Business and Economics, Netherlands; Inken Gast, Maastricht University, Netherlands

Graduates navigating on the labour market: A social network perspective

Ayla De Schepper, University of Antwerp, Belgium; Noel Clycq, University of Antwerp, Belgium; Eva Kyndt, Swinburne University of Technology, Australia

Session C: 6

Time: 17:15-18:45

Location: UOM_A11

SYMPOSIUM: PREDICTORS AND OUTCOMES OF HETEROGENEITY IN MOTIVATIONAL DEVELOPMENT IN EARLY SECONDARY SCHOOL**Chairs**

Wendy Symes, University of Potsdam, Germany; Rebecca Lazarides, University of Potsdam, Germany

Discussant

Barbara Flunger, Utrecht University, Netherlands

Comparison Effects of Students' Achievements on Self-Concepts and Task Values in Secondary School

Hanna Gaspard, TU Dortmund University, Germany; Ann-Kathrin Jaekel, University of Tuebingen, Germany; Richard Goellner, University of Tuebingen, Germany

Stability and Change in Students' Motivation Profiles: The Role of the Instructional Design

Tanja Held, University of Bern, Switzerland; Julia Morinaj, University of Bern, Switzerland; Tina Hascher, University of Bern, Institute of Educational Science, Switzerland

Motivational Profiles in Mathematics - Stability and Links with Educational and Emotional outcomes

Anna Widlund, Åbo Akademi University, Finland; Heta Tuominen, University of Eastern Finland, Finland; Johan Korhonen, Åbo Akademi University, Finland

Interindividual differences in the development of reading self-concept and value in secondary school

Wendy Symes, University of Potsdam, Germany; Rebecca Lazarides, University of Potsdam, Germany; Jan Retelsdorf, University of Hamburg, Germany

Session C: 7

Time: 17:15-18:45

Location: AUTH_DC2

SYMPOSIUM: HOW TO DESIGN EFFECTIVE EDUCATIONAL VIDEO?**Chair**

Kevin Ackermans, Open Universiteit, Department of Online Learning and Instruction, Netherlands

Organiser

Kevin Ackermans, Open Universiteit, Department of Online Learning and Instruction, Netherlands

Discussant

Mireille Bétrancourt, University of Geneva, Switzerland

A narrative frame is essential in emotional design: The role of value in evoking situational interest

Tino Endres, University of Freiburg, Germany; Alexander Eitel, University of Giessen, Germany; Alexander Renkl, Universität Freiburg, Germany

Distracted by a Talking Head? Effects of Instructor Presence in Educational Videos

Christina Sondermann, German Institute for Adult Education, Germany; Markus Huff, Eberhard Karls Universität Tübingen, Germany; Martin Merkt, Deutsches Institut für Erwachsenenbildung, Germany

Learning from video with captions vs. subtitles: when second language proficiency matters

Maria Pannatier, University of Geneva, Switzerland; Mireille Bétrancourt, University of Geneva, Switzerland

Let me think about it for a moment: Do prompts support learning with explainer videos?

Marie-Christin Krebs, University of Giessen, Germany; Katharina Braschoß, University of Giessen, Germany; danielle pelzer, University of Giessen, Germany; Alexander Eitel, University of Giessen, Germany

Session C: 8

Time: 17:15-18:45

Location: UOM_A05

SINGLE PAPER: CREATING SUPPORTIVE LEARNING SETTINGS FOR REFUGEE AND MIGRANT STUDENTS**Chair**

Emilia Andersson-Bakken, Oslo Metropolitan University, Norway

The challenges of using co-creation in schools: The case of the Empowering Young Translators Club

Sarah Crafter, The Open University, United Kingdom; Guida de Abreu, Oxford Brookes University, United Kingdom; Nelli Stavropoulou, The Open University, United Kingdom; Eleni Stamou, Oxford Brookes University, United Kingdom

Helping Italian school teachers design multilingual activities through a co-participative approach

Paolo Della Putta, University of Turin, Italy; Cecilia Andorno, Università di Torino, Italy; Rosa Pugliese, Alma Mater Studiorum Università di Bologna, Italy; Silvia Sordella, Università di Torino, Italy; Greta Zannoni, University of Bologna, Italy

Co-construction in learning settings: Unaccompanied migrant youth of 'errant' mobility

Charlotte Menin, COMBO, France

Spanish and English Proficiency of Latino Children of Immigrants to Predict Behavioral Adaptations

brian collins, Hunter College, City University of New York, United States; Claudio Toppelberg, Harvard University, United States

Session C: 9

Time: 17:15-18:45

Location: UOM_R05

SINGLE PAPER: COLLABORATIVE LEARNING IN ONLINE SETTINGS**Chair**

Gillian Peiser, Liverpool John Moores University, United Kingdom

Students' collaboration dispositions across diverse online collaborative problem solving skills

Päivi Häkkinen, University of Jyväskylä, Finland; Shupin Li, University of Jyväskylä, Finland; Johanna Pöysä-Tarhonen, University of Jyväskylä, Finland

Effects of Strategy Training & Advance Organizer in a Cooperative Online Format using Video Analysis

Agnes Eckart, Justus-Liebig-University Giessen, Germany; Vanessa A. Völlinger, Justus-Liebig-Universität Giessen, Germany

A group concept mapping study on perceptions of synchronous distance education

Iwan Wopereis, Open Universiteit, Department of Online Learning and Instruction, Netherlands

Uncertainty Markers as Cues to Form Group Uncertainty Awareness in Online Discussions

Lenka Schnaubert, University of Nottingham, United Kingdom; Anna Radtke, Ruhr-University Bochum & CAIS, Germany

Session C: 10

Time: 17:15-18:45

Location: UOM_A10

SINGLE PAPER: COMPUTER-SUPPORTED COLLABORATIVE LEARNING**Chair**

Ariadne Warmoes, Vrije Universiteit Brussel (VUB), Belgium

Effects of stimulated reflection on collaboration in an agent-based medical simulation

Constanze Richters, Ludwig-Maximilians-Universität (LMU), Germany; Laura Brandl, Ludwig-Maximilians-Universität (LMU), Germany; Matthias Stadler, Ludwig-Maximilians-Universität (LMU), Germany; Martin Fischer, LMU University Hospital, Institute of Medical Education, Germany; Ralf Schmidmaier, LMU University Hospital Munich, Germany; Frank Fischer, Ludwig-Maximilians-Universität (LMU), Germany

Effects of a collaboration script and a reflection prompt on the evaluation of Internet sources.

Carolin Baumgarten, Ruhr-Universität Bochum, Germany; Heiko Krabbe, Ruhr-University Bochum, Germany; Ingo Kollar, University of Augsburg, Germany; Marc Stadler, Ruhr-University Bochum, Institute of Educational Science, Germany

Analysing educational dialogue around shared artefacts in technology-mediated contexts

Sara Hennessy, University of Cambridge, United Kingdom

A Framework for Success of Virtual and Hybrid Collaboration: A Systematic Review

Ascha Ahmed, University of Mannheim, Germany; Viola Deutscher, University of Mannheim, Germany

Session C: 11

Time: 17:15-18:45

Location: UOM_A12

SINGLE PAPER: DEMOCRATIC CITIZENSHIP EDUCATION**Chair**

Blanka Rósa, Stockholm University, Sweden

What is colored in and what is colored out? Democracy training in vocational programs

Linda Ekström, Political science, school of social sciences, Sweden

Rehearsing Teacher-in-Role: a Door Opener for Intercultural Learning and Democratic Citizenship?

Michel Cabot, Western Norway University of Applied Sciences, Norway; Gunn Tone Iversen, Western University of Applied Sciences, Norway

Economics as elective subject – How do students with the subject economics differ from others?

Lucy Haag, University of Tübingen, Germany; Luis Oberrauch, University Tuebingen, Germany

Do I Need to Know the Unemployment Rate? Connecting Knowledge to Welfare Attitudes via Deservingness

Jakub Sowula, University of Teacher Education Berne, CH// University of Tuebingen, GER, Switzerland

Session C: 12

Time: 17:15-18:45

Location: AUTH_DC1

SINGLE PAPER: MATHEMATICS TEACHERS: INSTRUCTIONAL STRATEGIES AND COMPETENCIES**Chair**

Gemma O'Sullivan, Eindhoven University of Technology (TU/e), Netherlands

Conceptions of functional thinking of mathematics educators: an international interview study

Kerstin Frey, Ludwigsburg University of Education, Germany; Ute Sproesser, PH Ludwigsburg, Germany; Martina Geisen, University of Koblenz - Landau, Germany; Veronika Hubeňáková, Pavol Jozef Šafárik University in Košice, Slovakia; Monika Krišáková, Pavol Jozef Šafárik University in Košice, Slovakia; Nowińska Edyta, Universität Osnabrück, Germany; Marios Pittalis, University of Cyprus, Cyprus; Mirosława Sajka, Pedagogical University of Krakow, Poland; Michiel Veldhuis, Hogeschool IPABO Amsterdam/Alkmaar, Netherlands

Examining the effect of a deep lecture notetaking intervention on mathematics deeper understanding

Mengsi Liu, The University of Tokyo, Japan; Yuri Uesaka, The University of Tokyo, Japan

Early childhood education: Understanding mathematics teachers' diagnostic competence

Maike Hagena, University of Hamburg, Germany; Michael Besser, Leuphana University of Lüneburg, Germany

Mathematics teacher educators as a role model: What do preservice teachers learn about it?

Helena Montenegro, Universidad de Chile, Chile; Salomé Martínez, Universidad de Chile, Chile; Flavio Gúñez, Universidad de Chile, Chile

Assessing Conceptual Change around Reform-Based Math Practices in Ghanaian Pre-Service Teachers

Dionne Cross Francis, University of North Carolina at Chapel Hill, United States; Pavneet Kaur Bharaj, University of North Carolina, United States; Kathryn Habib, University of North Carolina at Chapel Hill, United States; Anna Hinden, University of North Carolina, United States; Anna Gustavson, University of North Carolina at Chapel Hill, United States

Session C: 13

Time: 17:15-18:45

Location: UOM_A07

SINGLE PAPER: ACHIEVEMENT GOAL THEORY: CLASSROOM GOAL STRUCTURES AND STUDENT GOALS**Chair**

Inge Van der Weijden, Leiden University, Netherlands

Exploring Classroom Goal Structures Based on Students' Own Words

József Balázs Fejes, University of Szeged, Hungary

Momentary Achievement Goal Profiles: Associations with Learning Activities, Interest, and Anxiety

Junlin Yu, University of Helsinki, Finland; Jussi Järvinen, University of Helsinki, Finland; Veli-Matti Vesterinen, University of Helsinki, Finland; Katarina Salmela-Aro, Helsinki University, Finland

Investigating Cheating in the Lab: Effects of Performance Goals and Evaluation Focus

Tanja Fritz, University of Augsburg, Germany; Hernán González Cruz, University of Mannheim, Germany; Stefan Janke, University of Mannheim, Germany; Martin Daumiller, University of Augsburg, Germany

Relationships Between Students' Achievement Goals and Social Network Centrality in the Classroom

Alla Hemi, Bar Ilan University, Israel; Nir Madjar, Bar-Ilan University, Israel; Yisrael Rich, Bar Ilan University, Israel; Martin Daumiller, University of Augsburg, Germany

Session C: 14

Time: 17:15-18:45

Location: AUTH_TE2

SINGLE PAPER: LEARNING MATHEMATICS IN PRIMARY EDUCATION

Chair

Katja Scharenberg, University of Education Freiburg, Germany

Learning spurious associations from mathematics textbooks: A replication and extension study

Lennart Schalk, PH Schwyz, Switzerland; Parvaneh Babari, Pädagogische Hochschule Schwyz, Switzerland; Bruno Rütsche, Schwyz University of Teacher Education, Switzerland

Learning through space: spatializing information as a determinant of academic skill development

Jolien Moorkens, UGENT, Belgium; Jean-Philippe van Dijck, Thomas More University College, Belgium; Wim Fias, UGENT, Belgium

Benefits of errors: Noticing young learners' mathematical thinking through confusions and mistakes

Fanni Biró, University of Szeged, Doctoral School of Education; MTA-SZTE Metacognition Research Group, Hungary; Csaba Csikos, University of Szeged, MTA-SZTE Metacognition Research Group, Hungary; Judit Sztányi, ELTE Eötvös Loránd University, Hungary

Assessing second grader's proportional vocabulary and proportional reasoning abilities

Karen De Keersmaeker, KU Leuven, Belgium; Elien Vanluydt, KU Leuven - University of Leuven, Belgium; Patrick Onghena, KU Leuven, Belgium; Wim Van Dooren, KU Leuven, Belgium

6-year-olds' structural awareness and arithmetic skills

Camilla Björklund, University of Gothenburg, Sweden; Angelika Kullberg, University of Gothenburg, Sweden

Session C: 15

Time: 17:15-18:45

Location: AUTH_DC3

SINGLE PAPER: USING IMMERSIVE TECHNOLOGIES FOR LEARNING AND ASSESSMENT

Chair

Fatou-Maty Diouf, University of Geneva, Switzerland

Instruction of Reception Goals as a Method to Direct the Processing of Uncertain Information

Stefanie Aberle, Leibniz-Institut für Wissensmedien, Germany; Manuela Glaser, Leibniz-Institut für Wissensmedien, Germany; Stephan Schwan, Leibniz-Institut für Wissensmedien, Germany

Detecting Self-regulated Learning Processes in VR: Causal Sequencing of Multimodal Data

Márta Sobocinski, University of Oulu, Finland; Daryn Dever, University of Central Florida, United States; Megan Wiedbusch, University of Central Florida, United States; Foyzal Mubarak, University of Oulu, Finland; Roger Azevedo, University of Central Florida, United States; Sanna Järvelä, University of Oulu, Finland

Using VR to Train Situation Awareness in Road Construction Operators: The Effect of Debriefing

Ilona Friso-van den Bos, University of Twente, Netherlands; Bas Kollöffel, University of Twente, Netherlands

Methodological challenges in evaluating the potential of Virtual Reality for classroom management

Jolien Mouw, University of Groningen, Faculty of Behavioural and Social Sciences, GION Education/Research, Netherlands; Marjon Fokkens-Bruinsma, University of Groningen, Netherlands

Session C: 16

Time: 17:15-18:45

Location: UOM_CR

SINGLE PAPER: SUPPORTING SELF-REGULATED LEARNING AND BEHAVIOUR WITH TECHNOLOGY

Chair

Silke Hertel, Ruprecht-Karls-Universität Heidelberg, Germany

Predicting self-regulated learning support needs during learning

Rick Dijkstra, Radboud University Nijmegen, Netherlands; Max Hinne, Radboud University, Netherlands; Eliane Segers, Radboud University, Netherlands; Inge Molenaar, Radboud University, Netherlands

Monitoring in Multimedia Learning: Does Monitoring one's Learning Process Affect Learning?

Emely Hoch, Leibniz-Institut für Wissensmedien, Germany; Katharina Fleig, Leibniz-Institut für Wissensmedien (IWM) | Knowledge Media Research Center, Germany; Katharina Scheiter, University of Potsdam, Germany

The promotion of self-regulated Learning: A video-based classroom study

Amina Rosenthal, University of Applied Sciences Northwestern Switzerland, Switzerland; Carmen Nadja Hirt, University of Applied Sciences and Arts Northwestern Switzerland (FHNW), Switzerland; Johannes Jud, University of Zurich, Switzerland; Tabea Daria Eberli, University of Applied Sciences and Arts Northwestern Switzerland PH (FHNW), Switzerland; Yves Karlen, University of Zurich, Switzerland

Promoting self-regulation during the COVID-mandated home-schooling period – Insights from interviews

Rutmer Ebbes, University of Amsterdam, Netherlands; Jaap Schuitema, University of Amsterdam, Netherlands; Marjolein Zee, Erasmus University Rotterdam, Netherlands; Brenda Jansen, University of Amsterdam, Netherlands; Helma Koomen, Research Institute of Child Development and Education, Netherlands

Session C: 17

Time: 17:15-18:45

Location: UOM_A08

SINGLE PAPER: TEACHERS' SELF-EFFICACY: DIFFERENT ASPECTS, DIFFERENT CONTEXTS**Chair**

Ella AIT-ZAQUIT, Fontys University of Applied Sciences, Netherlands

University teachers' self-efficacy beliefs

Irene Douwes-van Ark, University of Groningen, Netherlands; Marjon Fokkens-Bruinsma, University of Groningen, Netherlands; Jan Folkert Deinum, University of Groningen, Netherlands; Hanke Korpershoek, University of Groningen, Netherlands

Teachers' teaching profiles and self-efficacy as measured through the HEAT inventory

Liisa Postareff, HAMK University of Applied Sciences, Finland; Juulia Lahdenperä, Häme University of Applied Sciences, Finland; Telle Hailikari, Häme University of Applied Sciences, Finland; Anna Parpala, University of Helsinki, Finland

Teachers' social self-efficacy as a predictor of teacher-child relationships quality in Greek ECE

Anastasia Vatou, International Hellenic University, Greece; Athanasios Gregoriadis, Aristotle University of Thessaloniki, Greece; Nikolaos Tsigilis, Aristotle University of Thessaloniki, Greece; Vasileios Grammatikopoulos, International Hellenic University, Greece

Teachers' self-efficacy and intercultural classroom practices in diverse classroom contexts

Pauline Slot, Utrecht University, Netherlands; Paul Leseman, Utrecht University, Netherlands; Bodine Romijn, Utrecht University, Netherlands; Valentina Pagani, Università di Milano Bicocca, Italy

ANNOTATIONS:

PLEASE NOTE THAT THIS SESSION ROOM HAS CHANGED FROM AUTH_TE1 TO UOM_A08.

Session C: 18

Time: 17:15-18:45

Location: UOM_R08

SINGLE PAPER: BELONGING, WELL-BEING AND MENTAL HEALTH IN EDUCATION**Chair**

David Thore Gravesen, VIA University College, Denmark

Effects of Supplemental Instruction on Grades, Well-being and Belonging: a Field Experiment

Izaak Dekker, Amsterdam University of Applied Sciences (AUAS), Netherlands; Jantien Stam, Faculty of Education, Amsterdam University of Applied Sciences, Netherlands

Peer support in enhancing students' sense of belonging, study engagement and life satisfaction

Sanna Ulmanen, University of Helsinki, Finland; Lotta Tikkanen, University of Helsinki, Finland

What keeps first-year medical students mentally healthy? – A latent profile analysis

Sabine Polujanski, University of Augsburg, Germany; Thomas Rotthoff, Augsburg University, Germany; Ulrike Nett, Augsburg University, Germany; Ann-Kathrin Schindler, Augsburg University, Germany

Living better! Self-care for teachers – Effects of a prevention and health promotion intervention

Ingmar Hosenfeld, University of Kaiserslautern- Landau (RPTU), Germany; Malte Cramer, University of Koblenz - Landau, Germany; Gabriele E. Dlugosch, University of Koblenz - Landau, Germany; Teresa Noichl, University of Koblenz - Landau, Germany; Inga Wagner, University of Koblenz-Landau, Germany

Session C: 19

Time: 17:15-18:45

Location: AUTH_T002

SINGLE PAPER: DIFFERENT ASPECTS OF PARENTAL INVOLVEMENT IN CHILDREN'S EDUCATION**Chair**

Katrine Nesje, University of Oslo, Norway

Patterns of Partnership Practices: Digital Media vs. Face-to-Face Contact?

Yvonne Anders, Otto-Friedrich-University of Bamberg, Germany; Theresia Gabriele Hummel, Otto-Friedrich-University of Bamberg, Germany

Math motivation and math achievement in primary school: Relationship with parents practices

Francisco Peixoto, ISPA - Instituto Universitário | Center for Research in Education, Portugal; Lourdes Mata, ISPA - Instituto Universitário | Center for Research in Education, Portugal; Mafalda Campos, ISPA - Instituto Universitário | Center for Research in Education, Portugal; Jelena Radisic, University of Oslo, Norway

Family involvement, student behavioural engagement and approach to homework: a longitudinal study

Carolina Rodríguez Llorente, Universidad de La Coruña, Spain; Rocío González-Suárez, Camilo Jose Cela University, Spain; María Cabana-Bedoya, Universidad de La Coruña, Spain; Emmanuel Manalo, Kyoto University, Japan

Homework Stress and Learning Disability: The Role of Parental Shame, Guilt, and Need Frustration

Idit Katz, Ben-Gurion University of the Negev, Israel; Marianna Alesi, Ricercatore Università di Palermo, Italy; Angelica Moè, University of Padova, Italy

Session C: 20

Time: 17:15-18:45

Location: UOM_A04

SINGLE PAPER: PRE-SERVICE SCIENCE TEACHERS**Chair**

Marije Lesterhuis, UMC Utrecht, Netherlands

Analyzing data in the physics laboratory by pre-service physics teachers'

Ida Kukliansky, Ruppin Academic Center, Israel

Characteristics of productive discourse in undergraduate courses for student science teachers

Hadeel Edrees Dabbah, Ben Gurion University of the Negev, Israel, Israel; Orit Ben Zvi-Assaraf, Ben-Gurion University of the Negev, Israel

Facilitating coherent science instruction for pre-service teachers by reflection

Miikka Turkkila, University of Helsinki, Finland; Merike Kesler, University of Helsinki, Finland; Antti Laherto, University of Helsinki, Finland; Jari Lavonen, University of Helsinki, Finland; Kalle Juuti, University of Helsinki, Finland

Prospective teachers' use of construal-based intuitive explanations in science instructions

Sebastian Tempelmann, Institute for Research, & Development, Germany; Jakub Sowula, University of Teacher Education Berne, CH// University of Tuebingen, GER, Switzerland; Trix Cacchione, University of Teachereducation FHNW (PH FHNW), Switzerland

Session C: 21

Time: 17:15-18:45

Location: AUTH_T102

SINGLE PAPER: TEACHERS' PROFESSIONAL LEARNING COMMUNITIES AND LIFELONG LEARNING COMPETENCIES**Chair**

Denis Francesconi, University of Vienna, Austria

The Contributions of Unique Professional Learning Communities with Preservice and Tutor Teachers

Orna Heaysman, Hemdat College of Education, Israel; ALISA AMIR, Achva College of Education, Israel; Orit Avidov-Ungar, Achva College of Education, Israel; Revital Amzaleg, Achva College of Education, Israel; Yousif.a.l.a3@gmail.com Alamour, Achva College of Education, Israel

Regression Model of Lifelong Learning Competencies for the Teacher Trainers

Win Phyu Thwe, University of Szeged, Doctoral School of Education, Hungary; Anikó Kálmán, University of Szeged, Doctoral School of Education, Hungary

A socio-material framework to examine teachers' lifelong professional development trajectories

Giuseppe Ritella, University of Campania Luigi Vanvitelli, Italy; Alessio Surian, Università degli Studi di Padova, Italy

Exploring motivation to transfer in Early Childhood Education teachers in Mexico

Carla Quesada-Pallarès, Universitat Autònoma de Barcelona, Spain; Karla Villaseñor, Benemérita Universidad Autónoma de Puebla, Mexico; Cristina Torrelles, Institut Nacional d'Educació Física de Catalunya, Spain; Carlos Enrique Silva, Benemérita Universidad Autónoma de Puebla, Mexico

Session C: 22

Time: 17:15-18:45

Location: AUTH_T202

SINGLE PAPER: INSTRUCTIONAL DESIGN**Chair**

Eveline Wuttke, Goethe-Universität Frankfurt, Germany

The Flow-State of Teachers and the Learning Space: The Role of the Design Conditions

Tamir Zausmer, Tel-Hai Academic College & Golan Research Institute, Israel; Orly Dahan, Tel-Hai Academic College, Israel; Irit Sasson, Tel-Hai College, Israel

The Effects of Age and Interactions with the Robots Dash and Dot on Students' Computational Thinking

Yiota H. Diakou, University of Cyprus, Cyprus; Vaso Anastasiou, University of Cyprus, Cyprus; Charoula Angeli, University of Cyprus, Cyprus

Interleaving Effects in Blindfolded Perceptual Learning Across Various Sensory Modalities

Roman Abel, Ruhr University Bochum, Germany; Julian Roelle, Ruhr-University Bochum, Germany

Integration of everyday life aspects in classroom learning

Anne-Mai Näkk, Tallinn University, Estonia; Inge Timoštšuk, Tallinn University, Estonia

Session C: 23

Time: 17:15-18:45

Location: UOM_R09

SINGLE PAPER: WELL-BEING IN PRE-SERVICE AND EARLY CAREER TEACHERS**Chair**

Erika Schlatter, Leiden University, Netherlands

Well-being while becoming a teacher? A latent profile analysis among pre-service teachers

MANUELA HALDIMANN, University of Teacher Education St.Gallen, Switzerland; Tina Hascher, University of Bern, Institute of Educational Science, Switzerland; Doreen Flick-Holtzsch, University of Zurich, Switzerland

How do trainee teacher's relationship with their mentor explain how trainees experience their work?

Michael Goller, University of Kassel, Germany; Elisabeth Maué, University of Konstanz, Germany; Caroline Bonnes, University of Konstanz, Germany; Tobias Kärner, University of Hohenheim, Germany

Well-being Profiles of European Early Career Teachers

Kirsi Pyhäntö, University of Helsinki, Finland; Lotta Tikkanen, University of Helsinki, Finland; Roosa Yli-Pietilä, Tampere University, Finland; Tiina Soini-Ikonen, Tampere University, Finland; Janne Pietarinen, University of Eastern Finland, Finland; Auli Toom, University of Helsinki, Finland

Adaptation and Validation of a Measure of Preservice Teachers' Positive Mental Health Literacy

Ma. Jenina N. Nalipay, The Chinese University of Hong Kong, Hong Kong; Ching-Sing Chai, The Chinese University of Hong Kong, Hong Kong; Morris Siu-yung Jong, The Chinese University of Hong Kong, Hong Kong; Ronnel Bornasal King, The Chinese University of Hong Kong, Hong Kong; Imelu G. Mordeno, Mindanao State University-Iligan Institute of Technology, Philippines

Session C: 24

Time: 17:15-18:45

Location: UOM_R02

POSTER PRESENTATION: LEARNING AND INSTRUCTIONAL TECHNOLOGIES**Chair**

Kateryna Zabolotna, University of Oulu, Finland, Finland

Immersive Virtual Reality as a pedagogical tool for climate change education

Valdemar Stenberdt, University of Copenhagen, Denmark; Guido Makransky, University of Copenhagen, Denmark

Meta-re-analyses of cross-cultural learning strategies in higher education

Alex Shum, The University of Hong Kong, Hong Kong; Luke Fryer, University of Hong Kong, Hong Kong; Jan Vermunt, Eindhoven University of Technology, Netherlands; Clara Ajsuksmo, Atma Jaya Catholic University of Indonesia, Indonesia; Francisco Cano-Garcia, University of Granada, Spain; Vincent Donche, University of Antwerp, Belgium; Dennis Law, Caritas Institute of Higher Education, Hong Kong; Reinaldo J. Martínez-Fernández, Universitat Autònoma de Barcelona, Spain; Peter Van Petegem, University of Antwerp, Belgium; Ji Yu, Tsinghua University, China

Effects of Augmented Reality on knowledge acquisition in learning eye diseases: A mixed-method study

Juming Jiang, The University of Hong Kong, Hong Kong; Anakin Chu Kwan Lai, The University of Hong Kong, Hong Kong; Yau Kei Chan, The University of Hong Kong, Hong Kong

Learning Factories as new Learning Environments in Vocational Education and Training

Sebastian Anselmann, University of Education Schwäbisch Gmünd, Germany; Uwe Faßhauer, University of Education Schwäbisch Gmünd, Germany; Lars Windelband, Karlsruhe Institute of Technology (KIT), Germany

A computerized linguistic analysis of sociomoral language in students' Flipgrid videos

Ziye Wen, The Ohio State University, United States; Tzu-Jung Lin, The Ohio State University, United States; Michael Glassman, The Ohio State University, United States; Shantanu Tilak, The Ohio State University, United States; Wonjoon Cha, The Ohio State University, United States; Yue Sheng, The Ohio State University, United States; Saetbyul Kim, The Ohio State University, United States; Monica Lu, The Ohio State University, United States

Learning from dialogues and video annotation: A design experiment in teacher education.

Anki Strom, University of South-Eastern Norway, Norway

Session C: 25

Time: 17:15-18:45

Location: UOM_R03

POSTER PRESENTATION: INCLUSIVE AND SPECIAL EDUCATION AND LEARNING**Chair**

Tessa van Schijndel, University of Amsterdam, Netherlands

The implementation of formative assessment in inclusive mathematics instruction

Kyra Renftel, Leuphana University Lueneburg, Germany; Fynn Töllner, Leuphana University of Lueneburg, Germany; Michael Besser, University of Lueneburg, Germany; Poldi Kuhl, Leuphana Universität Lüneburg, Germany

The 'ToPPERS' framework of effective teaching principles in prevocational education

Charlotte Arnou, KU Leuven (BE), Belgium; Heline Van Peteghem, Vrije Universiteit Brussel, Belgium; Nadine Engels, Vrije Universiteit Brussel (VUB), Belgium; Ingeborg Placklé, Vrije Universiteit Brussel, Belgium; Machteld Vandecandelaere, KU Leuven, Belgium

Whole Person Research Productivity: Towards a More Equitable Higher Education Research Environment

Crishana Benton, University of North Florida, United States; Daniel Dinsmore, University of North Florida, United States

An individual behavioral intervention in Finland and Greece: A single case experimental study

Mika Paananen, University of Jyväskylä, Finland; Henrik Husberg, University of Helsinki / Niilo Mäki Institute, Finland; Anne Karhu, University of Eastern Finland, Finland; Athanasios Gregoriadis, Aristotle University of Thessaloniki, Greece; Sara Pöntinen, Niilo Mäki Institute, Finland; Hannu Savolainen, University of Eastern Finland, Finland

School inclusion 2014 and 2022: How do teachers' behavioral intentions and attitudes change?

Henrike Mentel, WWU Muenster, Germany; Natalie Foerster, University of Münster, Germany; Elmar Souvignier, University of Muenster, Germany

Do you Belong at your University? Belongingness and Authenticity in Higher Education

Anne-Roos Verbree, University Medical Center Utrecht, Netherlands; Gönül Dilaver, University Medical Centre Utrecht, Netherlands; Leoniek Wijngaards-de Meij, Utrecht University, Netherlands; Marieke van der Schaaf, University Medical Center Utrecht / Utrecht University, Netherlands

Session C: 26

Time: 17:15-18:45

Location: UOM_GYM

ROUNDTABLE: E-LEARNING AND ONLINE LEARNING**Chair**

Burcu Arslan, ETS Global, Netherlands

Balancing educational theory and teacher's input in designing teacher dashboards.

Susan Janssen, Radboud University Nijmegen, Netherlands; Carolien A. N. Knoop-van Campen, Radboud University Nijmegen, Netherlands; Anouschka van Leeuwen, Utrecht University, Netherlands; Inge Molenaar, Radboud University Nijmegen, Netherlands

Teaching information evaluation in self-paced e-learning mode: is distributed practice helpful?

Mônica Macedo-Rouet, CY Cergy Paris Université, France; Jean-Marc Meunier, Université Paris 8, France; Anna Potocki, Université de Grenoble, France; Jean-Francois Rouet, University of Poitiers, France

Supporting teachers' interpretation of multimodal learning analytics to assess student engagement

Megan Wiedbusch, University of Central Florida, United States; Roger Azevedo, University of Central Florida, United States

Selecting Didactic Templates for Optimizing Online Education

Emre Yilmazturk, Open University, Department of Online Learning and Instruction, Netherlands; Kevin Ackermans, Open Universiteit, Department of Online Learning and Instruction, Netherlands; Desirée Joosten-ten Brinke, Open University of the Netherlands, Netherlands; Gino Camp, Open Universiteit, Department of Online Learning and Instruction, Netherlands

Session C: 27

Time: 17:15-18:45

Location: UOM_A06

WORKSHOP: FORGETNOT – A DIGITAL TOOL FOR INFORMING TEACHING AND ENHANCING RETENTION**ForgetNot – a digital tool for informing teaching and enhancing retention**

Merike Saar, Tallinn University, Estonia

Session C: 28

Time: 17:15-18:45

Location: UOM_A09

ICT DEMONSTRATION: BUILDING BLOCKS: AN ADAPTIVE ONLINE PLATFORM FOR FOREIGN LANGUAGE LITERACY DEVELOPMENT**Building Blocks: An adaptive online platform for foreign language literacy development**

Quint Oga-Baldwin, Waseda University, Japan; Luke Fryer, The University of Hong Kong, Hong Kong; Alex Shum, The University of Hong Kong, Hong Kong; Kaori Nakao, Seinan Gakuin University, Japan; Lishi Liang, The University of Hong Kong, China

Session D: 1

Time: 08:00-09:30

Location: AUTH_DC3

INVITED SYMPOSIUM: A MULTI-DISCIPLINARY PERSPECTIVE ON IMMERSIVE VIRTUAL REALITY LEARNING AND INSTRUCTION**Chair**

Vincent Hoogerheide, Utrecht University, Netherlands

Organisers

Andreas Lachner, University of Tübingen, Germany; Vincent Hoogerheide, Utrecht University, Netherlands; Salome Wagner, University of Tübingen, Germany

Discussant

Tina Seufert, Ulm University, Germany

Encouraging Learners in VR to be More Reflective and Metacognitive

Mina Johnson, Arizona State University, United States; Shin-Phing Christine Yu, Department of Psychology, Arizona State University, United States; Anoosh Kapadia, School of Computing and Augmented Intelligence, Arizona State University, United States; Augustine Bennet, School of Speech and Hearing Sciences, Arizona State University, United States

Impact of an Experience vs. Information-Based VR Educational Simulation on Green Behavior

Adéla Plechatá, University of Copenhagen, Denmark; Marijke Hiltje Hielkema, Department of Food Science, University of Copenhagen, Denmark; Lisa Marie Merkl, Department of Marketing & Consumer Behaviour, University of Bayreuth, Germany; Michael Bom Frøst, Department of Food Science, University of Copenhagen, Denmark; Guido Makransky, University of Copenhagen, Denmark

Uncover Teachers' Movement Patterns in Immersive VR: Relevance for Visual Attention Performance

Yizhen Huang, University of Potsdam, Germany; Eric Richter, University of Potsdam, Germany; Thilo Kleickmann, Kiel University, Germany; Dirk Richter, University of Potsdam, Germany; Katharina Scheiter, University of Potsdam, Germany

Privacy in Educational Virtual Reality: Challenges for Educational Practices

Efe Bozkir, University of Tuebingen, Germany; Enkelejda Kasneci, Technical University of Munich, Germany

ANNOTATIONS:
SIG 7 INVITED SYMPOSIUM

Session D: 2

Time: 08:00-09:30

Location: AUTH_CH

INVITED SYMPOSIUM: TEACHER LEARNING ABOUT AND THROUGH DIALOGUE AND ARGUMENTATION**Chair**

Christa Asterhan, Hebrew University of Jerusalem, Israel

Discussant

Fritz C. Staub, University of Zurich, Switzerland

What's wrong with professional development for dialogic teaching?

Adam Lefstein, The Hebrew University of Jerusalem, Israel

Developing transformative tools for teacher and classroom dialogue for learning

Riikka Hofmann, University of Cambridge, United Kingdom

Arguments about Facilitating Argumentation: Teachers' Schemas about Dialogic Pedagogy

Sherice Clarke, University of California, San Diego, United States; Sushil S, University of California San Diego, United States; Katherine Dennis, University of California San Diego, United States

Promoting productive classroom talk in teacher interventions – A matter for pre-service teachers?

Alexander Groeschner, Friedrich Schiller University Jena, Germany

ANNOTATIONS:
SIG 26 INVITED SYMPOSIUM

Session D: 3

Time: 08:00-09:30

Location: HELEXPO_CC

INVITED SYMPOSIUM: HOW LEARNING AND EDUCATION SHAPE THE BRAIN**Chairs**

Dietsje Jolles, Universiteit Leiden, Netherlands; Stephan Vogel, University of Graz, Austria

Discussant

Bert De Smedt, KU Leuven, Belgium

How reading instruction shapes brain responses in individual children

Alexander Enge, Max Planck Institute for Human Cognitive and Brain Sciences, Germany; Michael Artur Skeide, Max Planck Institute for Human Cognitive and Brain Sciences, Germany

Synchronizing the brain: an executive functions-based reading program for children with dyslexia

Tzipi Horowitz Kraus, Technion - Israel Institute of Technology, Israel

Stop & Think: development and evaluation of a primary school-based maths and science intervention

Lucy Palmer, Birkbeck College, University of London, United Kingdom; Iroise Dumontheil, Birkbeck, University of London, United Kingdom

Cognitive, genetic and cerebral factors influencing learning to stop in childhood

Grégoire Borst, Université Paris Cité - CNRS, France

ANNOTATIONS:
SIG 22 INVITED SYMPOSIUM

Session D: 4

Time: 08:00-09:30

Location: UOM_CR

SYMPOSIUM: THE ROLE OF PRIOR KNOWLEDGE IN LEARNING**Chair**

Thomas Simacek, University of Trier, Germany

Organiser

Thomas Simacek, University of Trier, Germany

Discussant

Patricia Alexander, University of Maryland, United States

Prior knowledge in inquiry learning

Tessa Eysink, University of Twente, Netherlands; Xiulin Kuang, University of Twente, Netherlands; Ton de Jong, University of Twente, Netherlands

Studies on Prior Knowledge in Learning: A Comprehensive Bibliometric Analysis

Michael Schneider, University of Trier, Germany; André Bittermann, Leibniz-Institute for Psychology Information (ZPID), Germany; Danielle McNamara, Arizona State University, United States; Bianca Simonsmeier, University of Trier, Germany

How Prior Knowledge and Other Individual Variables Interact with Scaffolds in Learning Fractions

Sarah Hofer, Ludwig-Maximilians-Universität (LMU), Germany; Frank Reinhold, University of Education Freiburg, Germany; Sarah Bichler, Ludwig-Maximilians-University Munich, Germany

Preparation for Future Learning in Physics: The Importance of Overlap in Prior Knowledge

Christian Thurn, ETH Zurich, Switzerland; Peter Edelsbrunner, ETH Zurich, Switzerland; Ralph Schumacher, ETH Zurich, Switzerland; Elsbeth Stern, ETH Zurich, Switzerland

Session D: 5

Time: 08:00-09:30

Location: UOM_CH

SYMPOSIUM: MULTIPLE PERSPECTIVES ON STUDENT'S EMOTIONS EXPERIENCED IN CLASS**Chairs**

Lisa Stempfer, University of Vienna, Austria; Elisabeth Graf, University of Vienna, Austria

Organisers

Lisa Stempfer, University of Vienna, Austria; Elisabeth Graf, University of Vienna, Austria

Discussant

Reinhard Pekrun, University of Essex, United Kingdom

Say it, Feel it: How Emotions in Civic Education Relate to Classroom Climate and Participation

Elisabeth Graf, University of Vienna, Austria; Lisa Stempfer, University of Vienna, Austria; Krista Muis, McGill University, Canada; Thomas Goetz, Universität Wien, Austria

Control, Task-Value, and Emotions Predict Emotion Regulation During Mathematics Problem-Solving

Kelsey Losenno, McGill University, Canada; Krista Muis, McGill University, Canada

Associations between Teacher Heart Rate Variability and Teacher and Student Emotions and Engagement

Monika Donker, Utrecht University, Netherlands; Brianna Kennedy, Utrecht University, Netherlands; Sara Scrimin, University of Padova, Italy; Tim M. Mainhard, Leiden University, Netherlands

Beyond the Mean Score: Inter-Individual Differences in Temporal Fluctuations of Student Boredom

Lisa Stempfer, University of Vienna, Austria; Thomas Goetz, Universität Wien, Austria

Session D: 6

Time: 08:00-09:30

Location: UOM_A03

SYMPOSIUM: READING IN DIGITAL CONTEXTS: EFFECTS OF DISTRACTIONS AND MULTITASKING**Chair**

Lucia Mason, University of Padova, Italy

Organisers

Lucia Mason, University of Padova, Italy; Ladislao Salmerón, University of Valencia, Spain

Discussant

Ivar Bråten, University of Oslo, Norway

Media Multitasking Habits While Reading: Effects on Students' Calibration and Comprehension

Ladislao Salmerón, University of Valencia, Spain; Mario Romero, University of Valencia, Spain; Pablo Delgado, University of Sevilla, Spain; Lidia Altamura García, University of Valencia, Spain

Metacognitive Scaffolding, Digital Reading, and Mind Wandering in Adults With and Without ADHD

Adi Brann, Open University of Israel, Israel; Yael Sidi, the Open University of Israel, Israel

Effects of Reading With On-Screen Digital Distractions

Angelica Ronconi, University of Padova, Italy; Lucia Mason, University of Padova, Italy; Lucia Manzione, University of Padova, Italy; Anne Schueler, Leibniz-Institut für Wissensmedien, Germany

The Impact of Attentional Disruption During Digital Reading: Tracking the Reading Eyes

Véronique DRAI-ZERBIB, Université de Bourgogne, France; Guillaume Chevet, University of Burgundy, France; Marine Michelin, University of Burgundy, France; Annie Vinter, University of Burgundy, France; Thierry Baccino, University of Paris 8, Italy

Session D: 7

Time: 08:00-09:30

Location: AUTH_T102

SYMPOSIUM: RUBRICS: OLD AND NEW RESEARCH**Chair**

Ernesto Panadero, Universidad Deusto, Spain

Organiser

Ernesto Panadero, Universidad Deusto, Spain

Discussant

Jeff Greene, university of north carolina at chapel hill, United States

A meta-analysis on the effects of rubrics on academic performance

Anders Jönsson, Kristianstad University, Sweden; Ernesto Panadero, Universidad Deusto, Spain; Leire Pinedo, Universidad de Deusto, Spain; Belen Fernandez Castilla, Universidad Nacional de Educación a Distancia, Spain

Agency in rubric co-design: a participatory action research approach

Juuso Henrik Nieminen, The University of Hong Kong, Finland; Jani Hannula, University of Helsinki, Finland

A new view on rubrics – an eye tracking study of formative rubric feedback

Lieselotte Schmidt Postmes, UMC Utrecht, Netherlands; Renske de Kleijn, UMC Utrecht, Netherlands; Leen Catrysse, Open Universiteit, Department of Online Learning and Instruction, Belgium; Marije Lesterhuis, UMC Utrecht, Netherlands; Marieke van der Schaaf, University Medical Center Utrecht / Utrecht University, Netherlands

How students use rubrics: using process data from eye tracking

Ernesto Panadero, Universidad Deusto, Spain; Pablo Delgado, University of Sevilla, Spain; David Zamorano, Universidad de Deusto, Spain; Leire Pinedo, Universidad de Deusto, Spain; Alazne Fernández Ortube, University of Deusto, Spain; Lucía Barrenetxea-Minguez, University of Deusto, Spain

Session D: 8

Time: 08:00-09:30

Location: AUTH_DC2

SYMPOSIUM: THE POTENTIAL OF PLAY FOR CHILDREN'S LEARNING IN UNCERTAIN TIMES**Chair**

Lena Hollenstein, University of Teacher Education St.Gallen, Switzerland

Organiser

Lena Hollenstein, University of Teacher Education St.Gallen, Switzerland

Discussant

Franziska Vogt, St.Gallen University of Teacher Education, Switzerland

The relation of play and learning empirically studied and conceptualised

Camilla Björklund, University of Gothenburg, Sweden; Ingrid Pramling-Samuelsson, University of Gothenburg, Sweden

Early educators navigating a spectrum of play facilitation – exploring how practices weave and shift

Hanne Jensen, The LEGO Foundation, Denmark; Kathrine Jørgensen, The LEGO Foundation, Denmark

The role of kindergarten educators in pretend play for future skills and digital transformation

Lena Hollenstein, University of Teacher Education St.Gallen, Switzerland; Franziska Vogt, St.Gallen University of Teacher Education, Switzerland

Play and technology enhanced toys in early childhood education: an evaluation instrument

Maria Hatzigianni, University of West Attica, Greece; Anastasia Misirli, University of Patras, Greece; Vassilis Komis, University of Patras, Greece; Maria Dardanou, University of Tromsø, Norway; Iro Voulgari, National and Kapodistrian University of Athens, Department of Early Childhood Education, Greece; Dimitra Bourha, University of West Attica, Greece; Christoforos Karachristos, University of Patras, Greece

Session D: 9

Time: 08:00-09:30

Location: AUTH_DC1

SYMPOSIUM: TEACHER-CHILD INTERACTIONS IN EARLY CHILDCARE: CONDITIONS, ASSOCIATIONS AND MEASUREMENT APPROACHES**Chairs**

Franka Baron, University of Bern, Switzerland; Carolina Guedes, Faculty of Psychology and Educational Sciences, University of Porto, Porto, Portugal, Portugal

Discussant

Yvonne Anders, Otto-Friedrich-University of Bamberg, Germany

Domains of teacher-toddler interactions and associations with conditions in early childcare settings

Franka Baron, University of Bern, Switzerland; Anja Linberg, German Youth Institute, Germany; Simone Lehl, PH Weingarten, Germany; Dorothea Dornheim, University of Bamberg, Germany

Associations between job satisfaction, professional development, and educator-child interactions

Carolina Guedes, Faculty of Psychology and Educational Sciences, University of Porto, Porto, Portugal, Portugal; Joana Cadima, University of Porto, Portugal

Longitudinal association between teacher-child interaction quality and children's literacy skills

Jenni Salminen, University of Jyväskylä, Finland; Eija Pakarinen, University of Jyväskylä, Finland; Marja-Kristiina Lerkkanen, University of Jyväskylä, Finland

Measuring Interaction Quality in ECEC: An Empirical Analyses of the CLASS Pre-K and the SSTEW

Elisa Oppermann, University of Bamberg, Germany; Lars Burghardt, University of Bamberg, Germany; Julia Barenthien, University of Hamburg, Germany; Mirjam Steffensky, University of Hamburg, Germany; Yvonne Anders, Otto-Friedrich-University of Bamberg, Germany

Session D: 10

Time: 08:00-09:30

Location: AUTH_T002

SINGLE PAPER: TEACHERS' ASSESSMENT METHODS**Chair**

Estelle Desjarlais, Université du Québec à Montréal, Canada

Design choices in programmatic assessment: balancing between formative and summative

Bas Agricola, HU University of Applied Sciences, Netherlands; Marlies de Vos, Open University the Netherlands, Netherlands; Tamara van Schilt-Mol, HAN, Netherlands; Liesbeth Baartman, University of Applied Sciences Utrecht, Netherlands

Acceptance of simulation-based assessment formats in teacher education

Christoph Vogelsang, Paderborn University, Germany; Jana Meier, University of Paderborn, Germany; Thomas Janzen, PLAZ Professional School - Paderborn University, Germany; Philipp Wotschel, Paderborn Centre for Educational Research and Teacher Education - PLAZ-Professional School - University of Paderborn, Germany

Assessing pre-service EFL teachers' feedback performance in role-play-based simulations

Thomas Janzen, PLAZ Professional School - Paderborn University, Germany; Philipp Wotschel, Paderborn Centre for Educational Research and Teacher Education - PLAZ-Professional School - University of Paderborn, Germany; Jana Meier, University of Paderborn, Germany; Christoph Vogelsang, Paderborn University, Germany

Are Preschool Teachers Willing to Engage in Learning Situations?

Lukas Schmitt, RPTU Kaiserslautern-Landau, Germany; Miriam Leuchter, RPTU Landau, Germany; Laura Venitz, University of Koblenz-Landau, Germany

Session D: 11

Time: 08:00-09:30

Location: UOM_A02

SINGLE PAPER: MENTORING AND SUPERVISION IN WORKPLACE LEARNING**Chair**

Nele Bleuwx, KU LEUVEN, Belgium

What do workplace educators value about student performance?

Marlies de Vos, Open University the Netherlands, Netherlands; Liesbeth Baartman, University of Applied Sciences Utrecht, Netherlands; Cees van der Vleuten, Maastricht University, Netherlands; Ely de Bruijn, Hogeschool Utrecht / OU, Netherlands

Is it the clinical supervisor's role to support medical students' emotional challenges – if so when?

Linda Barman, KTH, Royal Institute of Technology, Sweden; Maria Weurlander, Stockholm University, Sweden; Henrik Lindqvist, Linköping University, Sweden; Robert Thornberg, Linköping University, Sweden; Annika Wernerson, Karolinska Institutet, Sweden

Pedagogic strategies of supervisors in health care placements

Lieve Ceelen, Open University of the Netherlands, Netherlands; Anne Khaled, HAN University of Applied Sciences, Netherlands; Loek Nieuwenhuis, Open University of the Netherlands, Netherlands; Ely de Bruijn, Open University of the Netherlands, Netherlands

Uncovering hidden Professional Learning Needs and Learning Preferences of Mentors in Flanders

Panayota Cotzaridis, KU LEUVEN, Belgium; Eline Vanassche, KU Leuven, Belgium; Ruben Vanderlinde, Ghent University, Belgium

Session D: 12

Time: 08:00-09:30

Location: AUTH_TE2

SINGLE PAPER: EMOTION REGULATION AND WELL-BEING**Chair**

Alejandro Ortega-Arranz, Universidad de Valladolid, Spain

The decline of learning enjoyment and learning effort over primary and lower-secondary school

Anna Hawrot, Leibniz Institute for Educational Trajectories (LIfBi), Germany; Ilka Wolter, Leibniz Institute for Educational Trajectories (LIfBi), Germany

Help me if you can I'm feeling down: Supporting emotion regulation and well-being in the classroom

Matt Somerville, IOE, UCL's Faculty of Education and Society, United Kingdom; Emily Midouhas, IOE, UCL's Faculty of Education and Society, United Kingdom; Marcos Delprato, University of Sussex, United Kingdom

Science students' burnout profiles, social identity and trust for teachers' faith in their abilities

Liisa Myyry, University of Helsinki, Finland; Veera Kallunki, University of Helsinki, Finland

Utilisation of self-reflection-based feedback to support teaching and well-being in higher education

Telle Hailikari, Häme University of Applied Sciences, Finland; Siru Myllykoski-Laine, University of Turku, Finland; Anna Parpala, University of Helsinki, Finland; Liisa Postareff, HAMK University of Applied Sciences, Finland

Session D: 13

Time: 08:00-09:30

Location: UOM_R08

SINGLE PAPER: TEACHER-STUDENT INTERACTIONS AND SOCIAL ASPECTS OF LEARNING**Chair**

Maria T. Sikkema-de Jong, Leiden University, Netherlands

Development of an observation system for teacher-child interaction in lower primary school classes

K.M. Starreveld, Vrije Universiteit Amsterdam, Netherlands; Mathilde Overbeek, VU University Amsterdam, Netherlands; Agnes Willems, VU University Amsterdam, Netherlands; Marian Bakermans-Kranenburg, ISPA - University Institute, Portugal

Impacts of Tablet Computer Use on the Quality of Teacher-Child Interactions

Ueli Thomas Studhalter, University of Teacher Education Lucerne (PH Luzern), Switzerland; Jossen Priska, University of Teacher Education Lucerne (PH Luzern), Switzerland; Marco Seeli, University of Teacher Education of Lucerne, Switzerland; Annette Tettenborn, University of Teacher Education of Lucerne, Switzerland

Decoding Prosociality: Understanding Classroom Based Experiences

Aneesa Pervez, IOE, UCL's Faculty of Education and Society, United Kingdom; Matt Somerville, IOE, UCL's Faculty of Education and Society, United Kingdom; Ed Baines, IOE, UCL's Faculty of Education and Society, United Kingdom

Exploring student-staff's contribution to quality work in higher education

Hannah Mülder, Faculty of Education, University of Oslo, NO, Norway; Carolina Borges Rau Steuernagel, Faculty of Medicine, University of Oslo, Norway; Rachele Esterhazy, University of Oslo, Norway; Tone Dyrdal Solbrekke, Faculty of Education, University of Oslo, Norway

Session D: 14

Time: 08:00-09:30

Location: AUTH_T202

SINGLE PAPER: GAME-BASED LEARNING**Chair**

Lucía Barrenetxea-Mínguez, University of Deusto, Spain

Assessment of divergent thinking through game based robotics

Margarida Margarida Romero, Université Côte d'Azur, France

Gaming for environmental citizenship: A systematic literature review on behaviour change games

Yiannis Georgiou, Cyprus University of Technology, Cyprus; Andreas Hadjichambis, Cyprus Center for Environmental Research & Education, Cyprus; Demetra Hadjichambi, Cyprus Center for Environmental Research & Education, Cyprus; Anastasia Adamou, Cyprus Center for Environmental Research & Education, Cyprus

Playing in the Museum. Influence of Students' Personal Epistemology on their Learning Experience.

Simon Morard, University of Geneva, Switzerland

Player types in digital learning systems - First results on the Gamification User Types Hexad Scale

Simon Schultze, University of Teacher Education St. Gallen, Switzerland; Jan Hochweber, St. Gallen University of Teacher Education, Switzerland

Session D: 15

Time: 08:00-09:30

Location: UOM_A10

SINGLE PAPER: TEACHING AND ASSESSING MATHEMATICS**Chair**

Clark Chinn, Rutgers University, United States

Focusing on Generic and Content-Specific Practices in Mathematics: A Meta-Analysis Spanning 50 Years

Charalambos Charalambous, University of Cyprus, Cyprus; Thekla Iakovou, University of Cyprus, Cyprus; Peng Peng, The University of Texas at Austin, United States

Mathematics teacher educators' perspective on teaching and collaboration in Chile

Paula Guerra, Universidad católica Silva henriquez, Chile; Helena Montenegro, Universidad de Chile, Chile; Flavio Guíñez, Universidad de Chile, Chile; Salome Martinez, Universidad de Chile, Chile; Constanza Ledermann, Universidad de Chile, Chile

Multi-criterion noticing in mathematics education - A vignette-based study

Sebastian Kuntze, Ludwigsburg University of Education, Germany; Marita Friesen, University of Education Heidelberg, Germany; Jens Krümmenauer, University of Education Ludwigsburg, Germany

Student teachers' attitudes predict self-efficacy for teaching low-achieving students in mathematics

Freya Winterle, University of Vienna, Germany; Nele Kampa, University of Vienna, Austria

Session D: 16

Time: 08:00-09:30

Location: UOM_A11

SINGLE PAPER: PARENTS, CHILDREN AND DIGITAL TECHNOLOGIES**Chair**

Evanna Ratner, Gordon Academic College, Israel

The digital home learning environment of toddlers

Sarah K Schröter, Otto-Friedrich University of Bamberg, Germany; Elisa Oppermann, University of Bamberg, Germany; Franziska Cohen, University of Education Freiburg, Germany; Luisa Prokupek, Otto-Friedrich-University of Bamberg, Germany; Sabine Blaurock, Otto-Friedrich-University of Bamberg, Germany; Yvonne Anders, Otto-Friedrich-University of Bamberg, Germany

Supporting children's numeracy development in families: A digital intervention study

Anna Mues, Ludwig-Maximilians-Universität (LMU), Germany; Efsun Birtwistle, Ludwig-Maximilians-Universität (LMU), Germany; Astrid Wirth, Ludwig-Maximilians-Universität München, Germany; Tina Schiele, Ludwig-Maximilians-Universität München, Germany; Frank Niklas, Ludwig-Maximilians-Universität (LMU), Germany

Framework of parental restrictive mediation for using digital technologies at home

Marit Puusepp, University of Tartu, Estonia; Margus Pedaste, University of Tartu, Estonia

App-based Support for Parental Self-Efficacy in the First 1,000 Days: A Randomised Control Trial

Laura Outhwaite, University College London, IOE, United Kingdom

Session D: 17

Time: 08:00-09:30

Location: UOM_A04

SINGLE PAPER: SPECIAL EDUCATIONAL NEEDS: DEAF AND HARD OF HEARING CHILDREN, NUMERACY AND SRL DIFFICULTIES**Chair**

Mark Smith, Kean University, United States

How adults with and without deafness process idioms: Direct retrieval or compositional analysis?

Inmaculada Fajardo, Department of Developmental and Educational Psychology/Reading Research Unit, Spain; Nadina Gómez-Merino, University of Valencia / Interdisciplinary Research Structure for Reading Research (ERI Lectura), Spain; Marta Vergara, Department of Developmental and Educational Psychology/Reading Research Unit, Spain; Antonio Ferrer, Department of Developmental and Educational Psychology/Reading Research Unit, Spain

Formative assessment in inclusive mathematics education in secondary schools: A systematic review

Fynn Töllner, Leuphana University of Lüneburg, Germany; Kyra Renftel, Leuphana University Lüneburg, Germany; Poldi Kuhl, Leuphana Universität Lüneburg, Germany; Michael Besser, Leuphana Universität Lüneburg, Germany

Interconnectedness between students' self-efficacy in self-regulation and strengths

Minna Ikävalko, University of Eastern Finland, Finland; Erko Sointu, University of Eastern Finland, Finland; Jaana Viljaranta, University of Eastern Finland, Finland; Matthew Lambert, University of Nebraska-Lincoln, United States

Session D: 18

Time: 08:00-09:30

Location: UOM_A05

SINGLE PAPER: COMPUTATIONAL THINKING AND SCIENTIFIC DECISION-MAKING**Chair**

Maria Öhrstedt, Stockholm University, Sweden

Effects of different learning environments on students' socio-scientific decision-making.

Maria Tsapali, University of Bristol, United Kingdom; Michelle Ellefson, University of Cambridge, United Kingdom

Robotics and programming in primary education: a teacher-led classroom intervention.

Amy Hughes, Cardiff University, United Kingdom; Sarah Gerson, Cardiff University, United Kingdom; Johanna van Schaik, Radboud University Nijmegen, Netherlands

Quality and equity in computational thinking education: the relationship with teachers' practices

Sara Monteyne, KU Leuven - Centre for educational effectiveness and evaluation, Belgium; Charlotte Struyve, KU Leuven - Centre for educational effectiveness and evaluation, Belgium; Johan van Braak, Ghent University, Belgium; Koen Aesaert, K.U.Leuven, Belgium

Associations between Creativity & Computational Thinking in Primary School: Computational Creativity

Ann-Kathrin Jaggy, Hector Research Institute of Education Sciences and Psychology, Germany; Katerina Tsarava, Hector Research Institute of Education Sciences and Psychology, Germany; Manuel Ninaus, University of Graz, Institute of Psychology, Austria; Mathias Benedek, University of Graz, Institute of Psychology, Austria; Korbinian Moeller, Loughborough University, Mathematics Education Centre, United Kingdom

Session D: 19

Time: 08:00-09:30

Location: UOM_R05

SINGLE PAPER: CLASSROOM ASSESSMENT AND FEEDBACK**Chair**

Alex Kozulin, Achva College and Feuerstein Institute, Israel

Student Self-Assessment and Feedback in Singapore Primary Schools: Engaging Teachers and Students

Hwei Ming Wong, National Institute of Education/Nanyang Technological University, Singapore, Singapore

Feedback in Singapore Classrooms: Findings on Assessment, Knowledge and Interactions Across 15 Years

Dennis Kwek, National Institute of Education/Nanyang Technological University, Singapore, Singapore

Differences between assessor and assessee outcomes in peer assessment: A systematic review.

David Zamorano, Universidad de Deusto, Spain; Maryam Alqassab, Universidad de Las Palmas de Gran Canaria, Spain; Ernesto Panadero, Universidad Deusto, Spain

Teachers stimulating self-regulated learning via co-regulated formative assessment practice

Marijke Veugen, Wageningen University and Research Centre, Netherlands; Judith Gulikers, Wageningen University, Netherlands; Perry den Brok, Wageningen University & Research, Netherlands

Session D: 20

Time: 08:00-09:30

Location: UOM_A06

SINGLE PAPER: MORAL, DEMOCRATIC AND CITIZENSHIP EDUCATION**Chair**

Auli Toom, University of Helsinki, Finland

Impact of a Media Literacy Intervention on Primary School Pupils' Ability to Recognize Fake News

Genevieve Allaire-Duquette, Université de Sherbrooke, Canada; Abdelkrim Hasni, Université de Sherbrooke, Canada; Josée Nadia Drouin, Agence Science-Pressé, Canada; Anne Gaignaire, Le Curieux, Canada; Audrey Groleau, Université du Québec à Trois-Rivières, Canada; Jean-Philippe Ayotte-Beaudet, Université de Sherbrooke, Canada

Friendship as political virtue: a project of citizenship education with middle school children

Rosi Bombieri, University of Verona, Italy; Luigina Mortari, University of Verona, Italy; Marco Ubbiali, University of Verona, Italy

Implementing VaKE in Science Education in different age groups

Panagiota Christodoulou, University of Western Macedonia, Greece; Dimitris Pnevmatikos, University of Western Macedonia, Greece; Georgios Malandrakis, Aristotle University of Thessaloniki, Greece; Evmorfia Garyfallogianni, University of Western Macedonia, Greece; Pantelis Kizos, University of Western Macedonia, Greece

Covid-19 pandemic as an opportunity for shaping civic identity among youth.

Lars Birger Davan, OsloMet, Norway

Session D: 21

Time: 08:00-09:30

Location: UOM_R09

SINGLE PAPER: READING: MOTIVATIONAL ASPECTS**Chair**

Justine Stang-Rabrig, TU Dortmund University, Germany

Increasing task-oriented reading skills of lower comprehenders on inferential questions

Ruth Villalon, University of Cantabria, Spain; Marian Serrano-Mendizábal, University of Valencia / Interdisciplinary Research Structure for Reading (ERI Lectura), Spain; Ángeles Melero, University of Cantabria, Spain; Belén Izquierdo-Magaldi, University of Cantabria, Spain

Implementation of professional development trajectories for reading instruction.

Lisa van der Sande, Vrije Universiteit Amsterdam, Netherlands; Marjolein Dobber, Vrije Universiteit Amsterdam, Netherlands; Jedidja Meima-den Breejen, Vrije Universiteit Amsterdam, Netherlands; Roel van Steensel, Erasmus University Rotterdam, Netherlands

Development of self-regulation searching processes while answering text-based pre-questions

Noemi Skrobiszewska, University of Valencia / Interdisciplinary Research Structure for Reading Research (ERI Lectura), Spain; Marian Serrano-Mendizábal, University of Valencia / Interdisciplinary Research Structure for Reading (ERI Lectura), Spain; Eduardo Vidal-Abarca, Universidad de Valencia, Spain; Paul van den Broek, Leiden University, Netherlands

Effects of the reading self-concept in relation to multilingualism

Daria Ferencik-Lehmkuhl, University of Cologne, Germany; Michael Schurig, TU Dortmund University, Germany; Nils Jaekel, University of Oulu, Finland; Sandra Schwinning, University of Wuppertal, Germany

Session D: 22

Time: 08:00-09:30

Location: UOM_R01

POSTER PRESENTATION: MOTIVATION, EDUCATIONAL TECHNOLOGIES AND TEACHING APPROACHES**Chair**

Lena Sofie Kegel, Educational Psychology, University of Münster, Germany

The Perception and Effect of Autonomy Support from Artificial Intelligence

Juming Jiang, The University of Hong Kong, Hong Kong; Ayumi Tanaka, Doshisha University, Japan

Doctoral Students' Language Preference and Motivation for Publication in Japan

Cheng Wenjuan, Hiroshima University, Japan

Associations between perfectionistic profiles and motivational profiles

Antti Pulkka, National Defence University, Finland; Heta Tuominen, University of Eastern Finland, Finland; Markku Niemivirta, University of Eastern Finland, Finland

How digital mathematics curricula can affect performance: A focus on motivational features

Margaret Bowman, Miami University, United States; Kui Xie, The Ohio State University, United States

(De)motivating teaching styles in higher education – validation of the circumplex model

Aleksandra Huic, Faculty of Humanities and Social Sciences, University of Zagreb, Croatia; Nina Pavlin-Bernardic, Faculty of Humanities and Social Sciences, Croatia; Vesna Vlahovic-Stetic, Faculty of Humanities and Social Sciences, University of Zagreb, Croatia

Using a Person-Centered Approach to Study Motivating and Demotivating Teaching Styles

Lennia Matos, Pontifical Catholic University of Peru, Peru; Rafael Gargurevich, Pontifical Universidad Católica del Perú, Peru; Dora Herrera, Pontifical Universidad Católica del Perú, Peru; Mordechai Benita, Ben-Gurion University of the Negev, Israel; Johnmarshall Reeve, Australian Catholic University, Australia

Session D: 23

Time: 08:00-09:30

Location: UOM_R02

POSTER PRESENTATION: THE USE OF EYE TRACKING IN STUDYING COGNITION AND LEARNING**Chair**

Dimitrios Stamovlasis, Aristotle University of Thessaloniki, Greece

Finding the balance: Can generating predictions promote conceptual change in intuitive physics?

Elfriede Diestel, DIPF Frankfurt, Germany; Maria Theobald, DIPF Frankfurt, Germany; Garvin Brod, DIPF Frankfurt, Germany

Using eye-tracking measures to predict novice learners' Python program reading performance

Meng-Jung Tsai, National Taiwan Normal University, Taiwan; Dai-Rung Li, National Taiwan Normal University, Taiwan; Po-Fen Hsu, National Taiwan Normal University, Taiwan; Chung-Yuan Hsu, National Pingtung University of Science and Technology, Taiwan; Guo-Li Chiou, National Taiwan Normal University, Taiwan

Using gaze-cued think-aloud to elicit teachers' professional vision of classroom management

Rebekka Stahnke, Leibniz Institute for Science and Mathematics Education, Germany; Sigrid Blomeke, University of Oslo, Norway

The role of prior knowledge in playing a game incorporating self-explanation: An eye-tracking study

Guo-Li Chiou, National Taiwan Normal University, Taiwan; Chung-Yuan Hsu, National Pingtung University of Science and Technology, Taiwan; Meng-Jung Tsai, National Taiwan Normal University, Taiwan

How to signal animations for learners with different prior knowledge levels: an eye-tracking study

Killyam Forge, University of Toulouse, CLLE, France; Julie Lemarié, University of Toulouse, CLLE, France; Jean-Michel Boucheix, University of Dijon, LEAD-CNRS, France; Pierre-Vincent Paubel, University of Toulouse, CLLE, France

Using AI in educational apps to individually support students: Opportunities and challenges

Maike Schindler, Universität zu Köln/ University of Cologne, Germany; Achim J. Lilienthal, TU Munich, Germany

Session D: 24

Time: 08:00-09:30

Location: UOM_R03

POSTER PRESENTATION: SUSTAINABLE DEVELOPMENT AND EDUCATION**Chair**

Lorenzo Miani, University of Bologna, Alma Mater Studiorum, Italy

Quality Teacher Education in the context of the Sustainable Development Goals

Sunet Grobler, University of Innsbruck - Institute for Teacher Education and School Research, Austria

Development of young children in China: Comparing parent report and direct assessment longitudinally

Zeyi Li, The University of Hong Kong, Hong Kong; Stephanie Wing Yan Chan, The University of Hong Kong, Hong Kong; Nirmala Rao, The University of Hong Kong, Hong Kong

Local and Regional Influences When Developing K-12 Climate Change Education Policy

Laurel Kruke, University of Southern California, United States; Gale Sinatra, University of Southern California, United States; Julie Marsh, University of Southern California, United States

Curriculum, transfer, equity. What research can('t) tell us.

Daniel Muijs, Queen's University Belfast, United Kingdom

The cultural correlates of learning poverty: An ecological analysis across 45 countries Long-term

Ronnell Bornasal King, The Chinese University of Hong Kong, Hong Kong; Jiaying Li, The University of Macau, Macao; Shing On Leung, The University of Macau, Macao

How do all these big concepts of a sustainable planet have the power to change my practice?

Torhild Høydalsvik, Volda University College, Norway; Jan Vikane, Volda University College, Norway

Session D: 25

Time: 08:00-09:30

Location: UOM_GYM

ROUNDTABLE: CITIZENSHIP EDUCATION AND ARGUMENTATION**Chair**

Bruno Poellhuber, University of Montreal, Canada

Disagreement as a value in education for democracy: Patterns of classroom talk and teacher beliefs

Andreas Reichelt Lind, OsloMet - Oslo Metropolitan University, Norway

Culture of Democracy in the Changing Landscape of Higher Education in the USA

Sandra Bass, UC Berkeley, United States; Thomas Schnaubelt, Stanford University, United States; Anna Mahoney, Tulane University, United States; Agnieszka Nance, Tulane University, United States; Ryan McBride, Tulane University, United States

School at the museum: non formal education and teachers' professional development

Laura Landi, Università di Modena e Reggio Emilia, Italy; Chiara Bertolini, Università degli studi di Modena e Reggio Emilia - Department of Education and Human Sciences, Italy; Lucia Scipione, University of Modena and Reggio Emilia, Italy; Chiara Pellicciari, Musei civici di Reggio Emilia, Italy; Riccardo Campanini, Musei civici di Reggio Emilia, Italy; Alessandra Landini, Istituto Comprensivo Manzoni, Italy; Agnese Vezzani, University of Modena and Reggio Emilia - Department of Education and Human Sciences, Italy; Mariangela Scarpini, Unimore (University of Modena and Reggio Emilia), Italy

The interplay between task characteristics and quality of student dialogue in citizenship education

Monika Waldis, University of Applied Sciences Northwestern Switzerland, Switzerland; Manuel Hubacher, University of Applied Sciences and Arts Northwestern Switzerland, Switzerland; Liliane Wenger, University of Applied Sciences and Arts Northwestern Switzerland FHNW, Switzerland; Acelya Aydin, University of Applied Sciences and Arts Northwestern Switzerland FHNW, Switzerland

Session D: 26

Time: 08:00-09:30

Location: UOM_A13

WORKSHOP: PORTRAIT METHODOLOGY: A VALUABLE TOOL TO STIMULATE TEACHER IDENTITY REFLECTION AND DEVELOPMENT**Portrait methodology: a valuable tool to stimulate teacher identity reflection and development**

Ella AIT-ZAOUIT, Fontys University of Applied Sciences, Netherlands

Session D: 27

Time: 08:00-09:30

Location: UOM_A07

ICT DEMONSTRATION: A NEW TOOL FOR EXPLORING SCIENTIFIC WORK AND WRITING IN THE FACE OF DIGITIZATION**A new tool for exploring scientific work and writing in the face of Digitization**

Jakob Ott, ZHAW Zurich University of Applied Sciences, Switzerland; Christian Rapp, ZHAW School of Management and Law, Switzerland; Otto Kruse, Zurich University of Applied Sciences (ZHAW), Switzerland; CURTIS GAUTSCHI, Zurich University of Applied Sciences (ZHAW), Switzerland

Keynotes: 1

Time: 09:45-11:15

Location: AUTH_CH

KEYNOTE: NUMBERS, BRAINS, DEVELOPMENT AND EDUCATION: PROGRESS, CHALLENGES AND PROMISE**Chair**

Eleni Kyza, Cyprus University of Technology, Cyprus

Numbers, Brains, Development and Education: Progress, Challenges and Promise

Daniel Ansari, University of Western Ontario, Canada

Keynotes: 2

Time: 09:45-11:15

Location: HELEXPO_CC

KEYNOTE: TOGETHER FOR LEARNING: UNDERSTANDING THE ECOSYSTEM OF COLLABORATIVE LEARNING**Chair**

Armin Weinberger, Saarland University, Germany

Together for learning: Understanding the ecosystem of collaborative learning

Crina Damsa, University of Oslo, Norway

Keynotes: 3

Time: 09:45-11:15

Location: UOM_CH

KEYNOTE: LEARNING TO MASTER WRITING: COPING WITH THE COGNITIVE DEMANDS OF WRITING PROCESSES**Chair**

Rui Alexandre Alves, University of Porto, Portugal

Learning to Master Writing: Coping with the Cognitive Demands of Writing Processes

Thierry Olive, CNRS & Université de Poitiers, France

Session E: 1

Time: 12:00-13:30

Location: HELEXPO_CC

INVITED SYMPOSIUM: CURRENT ISSUES IN MEASURING AND MODELING MOTIVATIONAL OUTCOMES INTERNATIONAL LARGE-SCALE ASSESSMENTS**Chair**

Ioulia Televantou, European University Cyprus, Cyprus

Organiser

Rolf Strietholt, IEA Hamburg, Germany

Discussant

Christoph Niepel, University of Luxembourg, Luxembourg

Associations between motivation, engaging teaching and math performance in TIMSS 2015

Michalis Michaelides, University of Cyprus, Cyprus; Militsa Ivanova, Department of Psychology, University of Cyprus, Cyprus

Motivational Outcomes and Immigration Background: Studying the "Immigrant Paradox" using TIMSS

Ioulia Televantou, European University Cyprus, Cyprus; Andrés Christiansen, International Association for the Evaluation of Educational Achievement (IEA), Netherlands; Ingrid Gogolin, University of Hamburg, Germany; Rolf Strietholt, IEA Hamburg, Germany

Exploring the Paradoxical Relation Between Achievement and Self-beliefs: A Country-level Trend Study

Rolf Strietholt, IEA Hamburg, Germany; Mojca Rozman, International Association for the Evaluation of Educational Achievement (IEA), Germany; Maximiliano Romero, International Association for the Evaluation of Educational Achievement (IEA), Germany

The method factor in mixed-worded scales: Relationships between scales and with student performance

Stefan Johansson, University of Gothenburg, Sweden; Rolf Strietholt, IEA Hamburg, Germany

ANNOTATIONS:

INVITED SYMPOSIUM OF THE INTERNATIONAL ASSOCIATION FOR THE EVALUATION OF EDUCATIONAL ACHIEVEMENT (IAE)

Session E: 2

Time: 12:00-13:30

Location: AUTH_CH

INVITED SYMPOSIUM: MEET THE EARLI EDITORS**Chair**

Rui Alexandre Alves, University of Porto, Portugal

Discussant

Rui Alexandre Alves, University of Porto, Portugal

Learning and Instruction

Gert Rijlaarsdam, University of Amsterdam, Netherlands

Educational Research Review

Hans Gruber, University of Regensburg, Germany

Frontline Learning Research

Nina Bonderup Dohn, University of Southern Denmark, Denmark

New Perspectives on Learning and Instruction

Isabel Raemdonck, Université Catholique de Louvain, Belgium

ANNOTATIONS:

INVITED SYMPOSIUM EARLI JOURNALS AND BOOK SERIES

Session E: 3

Time: 12:00-13:30

Location: UOM_R08

SYMPOSIUM: TEACHERS' AND SCHOOL STAFF MEMBERS' AGENCY, EXPERTISE AND TIES TO COLLEAGUES**Chair**

Tuire Palonen, University of Turku, Finland

Organiser

Tuire Palonen, University of Turku, Finland

Discussant

Michael Goller, University of Kassel, Germany

School staff members' professional agency in Finland, Scotland, and Sweden – a comparative study

Päivi Hökkä, University of Tampere, Finland; Katja Vähäsantanen, Häme University of Applied Sciences, Finland; Eija Räikkönen, University of Jyväskylä, Finland

Teachers' relational agency within professional networks for supporting migrant students

Natasa Pantic, University of Edinburgh, United Kingdom; Marc Sarazin, University of Edinburgh, United Kingdom; Thibault Coppe, University of Groningen, Netherlands; Didem Oral, University of Stockholm, Sweden; Eveliina Manninen, University of Jyväskylä, Finland

Teacher agency and ties to colleagues. A Survey study from two Finnish schools.

Tuire Palonen, University of Turku, Finland; Eveliina Manninen, University of Jyväskylä, Finland; Päivi Hökkä, University of Tampere, Finland

Can mathematics teachers' pedagogical content knowledge predict their professional influence?

Monika Grigaliuniene, Vytautas Magnus University, Lithuania; Erno Lehtinen, University of Turku, Finland

Session E: 4

Time: 12:00-13:30

Location: UOM_CH

SYMPOSIUM: TEACHING AND LEARNING ECONOMICS WITH VISUAL REPRESENTATIONS**Chair**

Malte Ring, University of Tübingen, Germany

Organiser

Malte Ring, University of Tübingen, Germany

Discussant

Stefanie Findeisen, University of Konstanz, Germany

What Makes Graph Tasks Difficult in Economics? Results from a Graph Competence Assessment Study

Malte Ring, University of Tübingen, Germany; Luis Oberrauch, University of Tuebingen, Germany

Effects of the representation of economic models with graphs on learners' ability to think in models

Jana Doris Franke, University of Education Freiburg, Germany, Germany; Franziska Birke, Institute for vocational training and economic education, Germany

Representing or affording? Visual representations in economics teaching as an agent in the classroom

Ann-Sofie Jägerskog, Stockholm University, Sweden

Visualising complexity and changeability - critical aspects of teaching visual models in economics

Malin Tväråna, Uppsala University, Sweden, Sweden; Ann-Sofie Jägerskog, Stockholm University, Sweden; Mattias Björklund, Stockholm University, Sweden; Sara Carlberg, n/a, Sweden; Patrik Gottfridsson, n/a, Sweden; Therese Juthberg, n/a, Sweden; Robert Kennedal, n/a, Sweden; Marie Losciale, n/a, Sweden; Jenny Rosengren, n/a, Sweden; Per Sahlstrom, n/a, Sweden; max Strandberg, Stockholm University, Sweden

Session E: 5

Time: 12:00-13:30

Location: UOM_A02

SYMPOSIUM: TEAM TEACHING, A PROMISING STRATEGY? EMPIRICAL INSIGHTS FROM NORWAY, SOUTH-AFRICA, AND FLANDERS**Chairs**

Hanne Tack, Ghent University, Belgium; Ruben Vanderlinde, Ghent University, Belgium

Organisers

Hanne Tack, Ghent University, Belgium; Mathea Simons, University of Antwerp, Belgium

Discussant

Elke Struyf, University of Antwerp, Belgium

A state-of-the-art on team teaching practices in Flanders: Results of a large-scale survey study

Aron Decuyper, Ghent University, Belgium; Dries De Weerd, University of Antwerp, Belgium; Dries Mariën, University of Antwerp, Belgium; Hanne Tack, Ghent University, Belgium; Mieke Meirsschaut, mieke.meirsschaut@arteveldehs.be, Belgium; Ruben Vanderlinde, Ghent University, Belgium; Mathea Simons, University of Antwerp, Belgium; Elke Struyf, University of Antwerp, Belgium

Shared responsibility between team teachers predicts student achievement – A Norwegian study

Aslaug Fodstad Gourvennec, University of Stavanger, Norway; Oddny Judith Solheim, The Norwegian Reading Centre, Norway; Per Henning Uppstad, Norwegian Reading Center, Norway; Erin McTigue, Fakultet for utdanningsvitenskap og humaniora Nasjonalt senter for leseopplæring og leseforskning, Norway

Measuring learners' perceptions of a team-taught learning environment: Development and validation

Mathea Simons, University of Antwerp, Belgium; Stephen Coetzee, University of Pretoria, South Africa; Marlies Baeten, KU Leuven, Belgium; Astrid Schmulian, University of Pretoria, South Africa

To Team or Not to Team: Undergraduate Students' Perspectives of Two Teachers Simultaneously in Class

Stephen Coetzee, University of Pretoria, South Africa; Astrid Schmulian, University of Pretoria, South Africa

Session E: 6

Time: 12:00-13:30

Location: UOM_A03

SYMPOSIUM: INTERVENTIONS FOR MULTIPLICATIVE REASONING: ADVOCATING AN EARLY START AND ATTENTION TO TRANSFER**Chair**

Xenia Vamvakoussi, University of Ioannina, Greece

Organisers

Wim Van Dooren, KU Leuven, Belgium; Xenia Vamvakoussi, University of Ioannina, Greece

Discussant

Andreas Obersteiner, Technical University of Munich, Germany

Early understanding of measurement division: the effects of a minimal intervention via game activity

Konstantinos Christou, Aristotle University of Thessaloniki, Greece; Anastasia Kandyli, University of Western Macedonia, Greece

Fostering early multiplicative reasoning: An ongoing design research study

GEORGIA PITTA, University of Ioannina, Greece, Greece; Xenia Vamvakoussi, University of Ioannina, Greece

Stimulating the early development of proportional reasoning: An intervention with second graders

Wim Van Dooren, KU Leuven, Belgium; Elien Vanluydt, KU Leuven - University of Leuven, Belgium; Laure De Keyser, KU Leuven, Belgium; Lieven Verschaffel, KU Leuven, Belgium

Adaptive or routine expertise in promoting spontaneous focusing on multiplicative relations

Jake McMullen, University of Turku, Finland; Saku Määttä, University of Turku, Finland; Antti Koskinen, University of Tampere, Finland, Finland; Hilma Halme, University of Turku, Finland; Kristian Kiili, Tampere University, Finland; Minna Hannula-Sormunen, University of Turku, Finland

Session E: 7

Time: 12:00-13:30

Location: AUTH_T002

SYMPOSIUM: REIMAGINING EDUCATION: FROM RESEARCH TO POLICY AND PRACTICE**Chair**

Nienke van Atteveldt, Vrije Universiteit Amsterdam, Netherlands

Discussant

Jo Van Herwegen, UCL Institute of Education, United Kingdom

The International Science and Evidence based Education (ISEE) Assessment: aims and findings

Nandini Chatterjee Singh, UNESCO Mahatma Gandhi Institute of Education for Peace and Sustainable Development, India; Nienke van Atteveldt, Vrije Universiteit Amsterdam, Netherlands

A global research agenda for evidence-based education

Grégoire Borst, Université Paris Cité - CNRS, France

How to strengthen evidence-based policymaking in education

Jonathan Kay, Education Endowment Foundation, United Kingdom

Education in the mixed reality

Anantha Duraipappah, UNESCOMGIEP, India

Session E: 8

Time: 12:00-13:30

Location: AUTH_DC2

SYMPOSIUM: HOW TO IMPROVE SOCIAL PRESENCE AND DECREASE ORCHESTRATION LOAD IN HYBRID LEARNING ENVIRONMENTS?**Chair**

Jan Elen, KU Leuven, Belgium

Organiser

Annelies Raes, KU Leuven, Belgium

Discussant

Gaëlle Molinari, TECFA, Université de Genève, Switzerland

Optimal experience in a hybrid computer-supported collaborative learning setting

Siem Buseyne, Faculty of Psychology and Educational Sciences, Centre for Instructional Psychology and Technology, KU Leuven Kulak, Belgium; Itec, imec research group at KU Leuven, Imec; CIREL, Centre Interuniversitaire de Recherche en Education de Lille, France, France; Celine Vens, KU LEUVEN, Belgium; Thierry Danquigny, Université de Lille, France; Fien Depaape, KU Leuven, Belgium; Jean Heutte, Université de Lille, France; Annelies Raes, KU Leuven, Belgium

Supporting teachers in hybrid learning environments: The role of learning analytics

Rogers Kaliisa, University of Oslo, Faculty of Education, Norway; Crina Damsa, University of Oslo, Norway

Teacher's and Students' Perception of Hybrid Classrooms in Secondary School Education

Alexander Groeschner, Friedrich Schiller University Jena, Germany; Dennis Hauk, Friedrich Schiller University Jena, Germany

Teacher orchestration load while designing and implementing hybrid collaborative activities

Alejandro Ortega-Arranz, Universidad de Valladolid, Spain; Alejandra Martínez Monés, Universidad de Valladolid, Spain; Ishari Amarsinghe, Universitat Pompeu Fabra, Spain; Yannis Dimitriadis, Universidad de Valladolid, Spain; Davinia Hernandez-Leo, Universitat Pompeu Fabra, Spain

Session E: 9

Time: 12:00-13:30

Location: UOM_A04

SINGLE PAPER: STUDENT ACADEMIC EMOTIONS AND INTEREST IN CLASSROOM AND IN COMPUTERISED LEARNING ENVIRONMENTS**Chair**

Maria Psyridou, University of Jyväskylä, Finland

Do Individual and Contextual Determinants Affect the Development of Emotions? Growth Curve Models.

Simon Meyer, University of Erlangen-Nuremberg, Germany; Juliane Schlesier, University of Oldenburg, Germany; Michaela Gläser-Zikuda, University of Erlangen-Nürnberg, Institute for Educational Science, Germany

Individual Differences as Determinants of Boredom and Shame in Socio-Emotional Conflict Situations

Lara Chehayeb, German Research Center for Artificial Intelligence (DFKI), Germany; Dimitra Tsovaltzi, DFKI (German Research Center for Artificial Intelligence) / Saarland University, Germany; Patrick Gebhard, German Research Center for Artificial Intelligence (DFKI), Germany

Automatically Detecting Affect in Computerized Learning Environments: A Systematic Literature Review

Maria Cutumisu, University of Alberta, Canada; Lydia González Esparza, The University of Alberta, Canada; Minghao Cai, University of Alberta, Canada; Iñaki Palestino Díaz, Tecnológico de Monterrey (ITESM), Mexico; Genaro Rebolledo Méndez, Tecnológico de Monterrey (ITESM), Mexico; Carrie Demmans Epp, University of Alberta, Canada

Maintaining interest: Contrasting the effects of triggered situational and individual interest

Thorben Jansen, Leibniz-Institut für die Pädagogik der Naturwissenschaften und Mathematik, Germany; Lars Höft, IPN - Leibniz Institute for Science and Mathematics Education, Germany; Luca Bahr, Leibniz Institute for Science and Mathematics Education (IPN), Germany

Session E: 10

Time: 12:00-13:30

Location: UOM_A10

SINGLE PAPER: INSTRUCTIONAL DESIGN IN HIGHER EDUCATION**Chair**

Daria Khanolainen, University of Jyväskylä, Finland

High-Stakes And High Goals: How Two Learning Goals can be Achieved When Studying Worked Examples

Nina Udvardi-Lakos, University of Freiburg, Germany; Marlene Weirich, Pädagogische Hochschule Freiburg, Germany; Julia Asbrand, Humboldt-University Berlin, Germany; Alexander Renkl, University of Freiburg, Germany

Designing professional education for adaptive expertise: case study results

Loek Nieuwenhuis, HAN University of Applied Sciences, Netherlands; Lia Fluit, Radboud University Medical Center, Netherlands; Wietske Kuijer-Siebelink, HAN University of Applied Sciences, Netherlands; Carla Oonk, Wageningen University, Netherlands; Petra Swennenhuis, Fontys University of Applied Sciences, Netherlands; Anne Khaled, Hogeschool Utrecht (University of Applied Sciences Utrecht) and HAN UAS, Netherlands

An analysis of instructional methods in higher education: Differences by course and discipline.

Javier Fernández, Universidad de Leon, Spain; Ernesto Panadero, Universidad Deusto, Spain; Carlos Rodríguez-Hernández, Institute for the Future of Education, Tecnológico de Monterrey, Mexico; Juan Fraile, Universidad Francisco de Vitoria, Spain

Students' disciplinary values navigation through troubled pasts and contemporary resistances

Sugat Dabholkar, GSE-Rutgers University, United States; Julia Gouvea, Tufts University, United States; Lawrence Uricchio, Tufts University, United States

Session E: 11

Time: 12:00-13:30

Location: UOM_A08

SINGLE PAPER: DIFFERENTIATED INSTRUCTION**Chair**

Alyssa Lauren Grecu, Center for Research on Education and School Development, Germany

Preparing teachers for differentiating their instruction: A meta-analysis and a multiple-case study

Rebecca Kahmann, Behavioural Science Institute, Radboud University Nijmegen, Netherlands; Mienke Droop, Behavioural Science Institute, Radboud University Nijmegen, Netherlands; Ard Lazonder, Radboud University, Netherlands

Teacher programs for differentiated instruction: a review study

Berber Langelaan, Hogeschool van Amsterdam, Netherlands; Ron Oostdam, University of Amsterdam, Netherlands; Lisa Gaikhorst, University of Amsterdam, Netherlands; Wouter Smets, Karel de Grote University college, Belgium

Differentiated students or differentiated instruction?

Sérgio Gaitas, ISPA-Instituto Universitário / CIE - ISPA (Center for Research in Education), Portugal

Can differentiated instruction support students' socio-emotional variables?

Marcela Gerardina Pozas Guajardo, Professional School of Education, Humboldt-Universität zu Berlin, Germany; Verena Letzel, University of Trier, Germany

ANNOTATIONS:

PLEASE NOTE THAT THIS SESSION ROOM HAS CHANGED FROM AUTH_TE1 TO UOM_A08.

Session E: 12

Time: 12:00-13:30

Location: AUTH_DC1

SINGLE PAPER: STUDENT AND TEACHER GROWTH MINDSETS**Chair**

Debra Myhill, University of Exeter, United Kingdom

The rich gets richer: Growth mindsets matter more in affluent contexts

Rommel Bornasal King, The Chinese University of Hong Kong, Hong Kong; Faming Wang, The University of Hong Kong, Hong Kong; Shing On Leung, The University of Macau, Macao; Andrew Elliot, University of Rochester, United States

The effects of growth mindset and emotions on L2 writing performance

JIAHUAN ZHANG, The University of Hong Kong, China; Choo Mui Cheong, The University of Hong Kong, Hong Kong; Yuan Yao, The Hong Kong Polytechnic University, Hong Kong; Xinhua Zhu, The Hong Kong Polytechnic University, Hong Kong

How growth mindsets induced by a pedagogical agent can foster learning in primary school

Konstantinos Michos, University of Zurich, Institute of Education, Switzerland; Sascha Schneider, University of Zurich, Switzerland; Kate Xu, Open Universiteit Nederland, Netherlands

Session E: 13

Time: 12:00-13:30

Location: UOM_A11

SINGLE PAPER: CURRICULUM DEVELOPMENT IN HIGHER EDUCATION**Chair**

Eric Schoute, University of Maryland, United States

Examining a 'throughline' in research-based curricula by researcher-student collaborative inquiries

Tracy Zou, The Chinese University of Hong Kong, Hong Kong; Tom Barry, University of Bath, United Kingdom; Ka Sing Yu, The University of Hong Kong, Hong Kong; Jetty C. Y. Lee, The University of Hong Kong, Hong Kong; King L. Chow, The Hong Kong University of Science and Technology, Hong Kong; Lily Y. Y. Leung, The Chinese University of Hong Kong, Hong Kong

Unraveling research competence for professionals: a concept analysis based on a systematic review.

Lisette Munneke, Utrecht University of Applied Sciences, Netherlands; Pieter Schilder, HU University of Applied Sciences Utrecht, Netherlands; Belinda Ommering, Utrecht University of Applied Sciences, Netherlands; Daan Andriessen, Utrecht University of Applied Sciences, Netherlands

Co-creation and student-staff partnership in higher education. A scoping review

Maren Omland, Oslo Metropolitan University, Norway; Frederick A. Reiersen, Oslo Metropolitan University, Norway; Anja Amundrud, University of Oslo, Norway; Hege Hermansen, Oslo Metropolitan University, Norway; Magnus Hontvedt, University of South East Norway, Norway

Preparing students for peer-led education and their outcomes: A systematic literature review

Marieke Thurlings, Eindhoven University of Technology, Netherlands; Gerdienke Reijmers, Universiteit Utrecht, Netherlands; Karline Timmers, Universiteit van Amsterdam, Netherlands; Jan van der Veen, Eindhoven School of Education, Netherlands; Pieter de Bordes, Universiteit Utrecht, Netherlands

Session E: 14

Time: 12:00-13:30

Location: UOM_A07

SINGLE PAPER: EXAMPLE- AND PROBLEM-BASED LEARNING**Chair**

Ellen Claes, KU Leuven, Belgium

A Systematic Review on Erroneous Examples

Marc Rodemer, University of Duisburg-Essen, Germany; Sonja Dieterich, University of Duisburg-Essen, Germany; Stefan Rumann, University of Duisburg-Essen, Germany

Correct or erroneous examples first? Effects of the order of different example types on learning

Lukas Wesenberg, Chemnitz University of Technology, Institute for Media Research, Germany; Felix Kriegelstein, Chemnitz University of Technology, Germany; Sebastian Jansen, Chemnitz University of Technology, Faculty of Humanities, Institute for Media Research, Germany; Günter Daniel Rey, Chemnitz University of Technology, Germany; Maik Beege, University of Education Freiburg, Germany; Sascha Schneider, University of Zurich, Institute of Education, Germany

Students' navigation in an open-ended project addressing democracy and citizenship

Anniken Furberg, University of Oslo, Norway; Sigrid Ernsten, Department of Teacher Education and School Research, University of Oslo, Norway; Kari Anne Rødnes, University of Oslo, Norway

Effects of Prior Instruction and Feedback on Students' Learning

Salome Wagner, University of Tübingen, Germany; Leonie Sibley, University of Tübingen, Germany; David Weiler, University of Tübingen, Germany; Jan-Philipp Burde, University of Tübingen, Germany; Katharina Scheiter, University of Potsdam, Germany; Andreas Lachner, University of Tübingen, Germany

Session E: 15

Time: 12:00-13:30

Location: UOM_A05

SINGLE PAPER: COOPERATIVE LEARNING, SOCIAL AND MOTIVATIONAL PROCESSES**Chair**

Francisco Peixoto, ISPA - Instituto Universitário | Center for Research in Education, Portugal

Cooperative Learning in the classroom - A mixed methods study on the quality of implementation

Vanessa A. Völlinger, Justus-Liebig-Universität Giessen, Germany; Katja Adl-Amini, TU Darmstadt, Germany; Agnes Eckart, Justus-Liebig-University Giessen, Germany

Solitary Practice and Band Rehearsals: Design and Strategy Use Regarding the Professional Level

Simon Schmidt, Universität Regensburg, Germany; Hans Gruber, University of Regensburg, Germany

Exploring the Enactment of Open-Schooling Projects and their Impact on Students' Self-Determination

Yvoni Pavlou, University of Cyprus, Cyprus; Marios Papaevripidou, University of Cyprus, Cyprus; Georgia Kouti, University of Cyprus, Cyprus; Marilena Savva, University of Cyprus, Cyprus; Pavlos Koulouris, Ellinogermaniki Agogi, Greece; Zacharias Zacharia, University of Cyprus, Cyprus

Fostering students' autonomous motivation with a societal impact project

Yuan Yuan Zhu, Maastricht University, FHML, Dept. of Educational Research and Development, Netherlands; Diana Dolmans, Maastricht University, Netherlands; Rashmi Kusrurkar, Vrije Universiteit Amsterdam, Netherlands; Leo Koehler, Maastricht University, Faculty of Health, Medicine and Life Sciences, Netherlands; Latifa Abidi, Maastricht University, Faculty of Health, Medicine and Life Sciences, Netherlands; Hans Savelberg, Maastricht University, Faculty of Health, Medicine and Life Sciences, Netherlands

Session E: 16

Time: 12:00-13:30

Location: AUTH_T102

SINGLE PAPER: GENDER, MOTIVATION AND STEM CHOICES**Chair**

Alla Hemi, Bar Ilan University, Israel

Perfectionism and Resilience: The role of Gender

Athina Voulgari, Aristotle University of Thessaloniki, Greece; Susana Panteliadou, Aristotle University of Thessaloniki, Greece

Primary-school students' motivational profiles and their connections with gender and achievement

Anna Rawlings, University of Jyväskylä, Finland; Kati Vasalampi, University of Jyväskylä, Finland

How Aware Are Teachers Towards Math-gender Stereotype Reinforcing Behavior? A Video Experiment

Anna-Sophia Dersch, Justus-Liebig-Universität Gießen, Germany; Anke Heyder, Ruhr-University Bochum, Germany; Alexander Eitel, University of Giessen, Germany

Why do they pursue a major in math and science?: Female preservice teachers' perspective

Gamze İnan, Boğaziçi University, Faculty of Education, Türkiye; İrfan Erdoğan, Bogazici University, Türkiye

Session E: 17

Time: 12:00-13:30

Location: AUTH_T202

SINGLE PAPER: LEARNING DURING COVID-19

Chair

Signe Pirkko Siklander, University of Oulu, Finland, Finland

Inclusive school cultures and digital school development processes in Austria in times of COVID-19.

Ricarda Derler, University of Graz, Austria; Melina Tinnacher, University of Graz, Austria; Heike Wendt, University of Graz, Austria

Differential Effects of COVID-19 School Closures on Students' Achievement

Tim Fütterer, University of Tübingen, Germany; Tony Tan, University of Oslo, Norway; Rolf Vegar Olsen, University of Oslo, Norway; Astrid Marie Jorde Sandsør, University of Oslo, Norway; Sigrid Blömeke, University of Oslo, Norway

Educational interventions for improving literacy to Greek primary school students during COVID-19

Styliani Tsesmeli, University of Patras, Department of Educational Studies and Social Work, Greece; Ioanna Skarmoutsou, University of Patras, Department of Educational Studies and Social Work, Greece

"Silent voices" in COVID-19: Students' experiences of wellbeing, learning, social relationships

Eija Pakarinen, University of Jyväskylä, Finland; Venla Panula, University of Jyväskylä, Finland; Noona Kiuru, University of Jyväskylä, Finland; Sanni Pöysä, University of Jyväskylä, Finland; Niina Junttila, University of Turku, Finland; Matilda Sorkkila, University of Jyväskylä, Finland; Marja-Kristiina Lerkkanen, University of Jyväskylä, Finland

Session E: 18

Time: 12:00-13:30

Location: AUTH_TE2

SINGLE PAPER: MINORITY AND MIGRANT STUDENTS: WRITING AND LITERACY

Chair

Isabelle Krummenacher, Abteilung für Schul- und Unterrichtsforschung, Institut für Erziehungswissenschaft, Bern, Switzerland

How long does it take pupils to acquire Proficiency in English?

Steve Strand, University of Oxford, United Kingdom; Ariel Lindorff, University of Oxford, United Kingdom

Effects of feedback on writing: Differences between students with and without migration backgrounds

Nora Müller, Westfälische Wilhelms-Universität Münster, Germany; Vera Busse, Westfälische Wilhelms-Universität Münster, Germany; Till Utesch, Westfälische Wilhelms-Universität Münster, Germany

Hoping for linguistic diversity in academic writing

Ana Costa, University of Lisbon, Linguistics Center and Polytechnic Institute of Setúbal, Portugal

Literacy and literacy didactics in the context of migration: A systematic literature review

Olga Kostoula, Private University of Education, Diocese Linz, Austria; Nicole Kronberger, Institute of Education and Psychology, Austria

Session E: 19

Time: 12:00-13:30

Location: AUTH_DC3

SINGLE PAPER: COMPREHENSION OF TEXT AND GRAPHICS THROUGH MULTIMEDIA LEARNING

Chair

Engin Ader, Boğaziçi University, Türkiye

How does seductive details combine with animated pictures influence students' learning?

Tiphaine Colliot, CeRCA UMR7295 Université de Poitiers, France; Jean-Michel Boucheix, University of Dijon, LEAD-CNRS, France

Mapping processing and comprehension in learning from video combining trace and recall data.

Marilyn Gijzen, University of Antwerp, Belgium; David Gijbels, University of Antwerp, Belgium; Sven De Maeyer, Antwerp University, Belgium; Leen Catrysse, Open Universiteit, Department of Online Learning and Instruction, Belgium

Effects of Design Decisions of Educational Video Games on Learning and Students' Thoughts

Ercan TOP, Bolu Abant İzzet Baysal University, Türkiye; Emre GÜNEL, Abant İzzet Baysal University, Türkiye

A test of a cinematographic principle in learning a first aid procedure from video

Jean-Michel Boucheix, University of Dijon, LEAD-CNRS, France; Martin Merkt, Deutsches Institut für Erwachsenenbildung, Germany; Julie Perrin, University of Dijon, LEAD-CNRS, France; Joanna Duval, University of Dijon, LEAD-CNRS, France; Alexandre Benoist, Biomedical Engineering and Innovation Direction, CESITECH, William Morey Hospital, Chalon sur Saone, France; Stéphane Argon, University of Dijon, LEAD-CNRS, France; Stéphanie Javelier, Anesthesia Department, CESITECH, William Morey Hospital, Chalon sur Saone, France

Session E: 20

Time: 12:00-13:30

Location: UOM_CR

SINGLE PAPER: EDUCATIONAL POLICY INITIATIVES IN SECONDARY AND HIGHER EDUCATION**Chair**

Jason Chen, College of William and Mary, United States

Entrepreneurship in school education: policy directions and pedagogical considerations

Sofia Boutsiouki, University of Macedonia, Greece; Nikolaos Mouratoglou, European Schoolnet, Belgium

A Delphi Study at secondary schools to identify entrepreneurship education norms

Sultan Goksen-Olgun, Maastricht University School of Business and Economics, Netherlands; Wim Groot, Maastricht University, Netherlands; Ingrid Wakkee, Amsterdam University of Applied Science, Netherlands; Richard Martina, Amsterdam University of Applied Science, Netherlands

Roles in teacher teams within higher education: a review

Belinda Ommering, Utrecht University of Applied Sciences, Netherlands; mieke koeslag-kreunen, Hogeschool Utrecht (University of Applied Sciences Utrecht), Netherlands

Double First-Class Initiative : An application of performance-based funding at a Chinese university

Iat Fei Lam, The Chinese University of Hong Kong (CUHK), Hong Kong; Manhong Lai, The Chinese University of Hong Kong, Hong Kong

Session E: 21

Time: 12:00-13:30

Location: UOM_A13

SINGLE PAPER: THE COMPLEXITY OF ACADEMIC WRITING**Chair**

Rosalind Horowitz, The University of Texas at San Antonio, United States

How did School Quality Develop During COVID-19 – Analyses on Educational Inequality

Christoph Helm, Johannes Kepler University Linz, Austria; Stephan Gerhard Huber, PH Zug, Switzerland

The Writing-Reading Nexus: Authors and Their Audiences

Nancy Nelson, Louisiana State University, United States; Kim Skinner, Louisiana State University, United States; Estanislado Barrera, Louisiana State University, United States

Measuring discovery through writing

David Galbraith, University of Southampton, United Kingdom; Amy Peters, University of Southampton, United Kingdom; Sophie Hall, University of Southampton, United Kingdom; Veerle Baaijen, CLCG University of Groningen, Netherlands

Research Writing as a Tool for Doctoral Students' and Early Career Researchers' Development

Montserrat Castelló, Ramon Llull University, Spain

Session E: 22

Time: 12:00-13:30

Location: UOM_R09

SINGLE PAPER: TEACHER LEARNING AND PROFESSIONAL DEVELOPMENT**Chair**

Valerie Margrain, Karlstad University, Sweden

Investigating teacher learning? A scoping review on the Interconnected Model of Professional Growth

Elisa Calcagni, Friedrich Schiller University Jena, Germany; Alexander Groeschner, Friedrich Schiller University Jena, Germany; Jan van Driel, The University of Melbourne, Australia; Hilary Hollingsworth, Australian Council for Educational Research (ACER), Australia

Supporting & sharing practitioner learning on a global scale through locally-contextualised inquiry

Alison Twiner, Hughes Hall, University of Cambridge, United Kingdom; Sara Hennessy, University of Cambridge, United Kingdom; Patrick Carmichael, University of Cambridge, United Kingdom; Peter Dudley, University of Cambridge, United Kingdom; Ying Ji, University of Cambridge, United Kingdom

The impact of Research Lesson Study on teacher learning patterns

Maria Vrikki, University of Nicosia, Cyprus; Leonidas Kyriakides, University of Cyprus, Cyprus; Jan Vermunt, Eindhoven University of Technology, Netherlands; Chrissavgi Triantafyllou, National and Kapodistrian University of Athens, Greece; Panayiotis Antoniou, University of Cyprus, Cyprus; Efi Paparistodemou, Cyprus Pedagogical Institute, Cyprus; Maria Anastasou, University of Cyprus, Cyprus

Supporting Secondary Mathematics Coaches' Learning Through One-on-One Meta-coaching

Hilda Borko, Stanford University, United States; Marsha Ing, University of California, United States; Michael Jarry-Shore, Boise State University, United States; Thomas Smith, Vanderbilt University, United States

Session E: 23

Time: 12:00-13:30

Location: UOM_R01

POSTER PRESENTATION: FOSTERING ROBUST, ECOLOGICALLY-VALID AND SUSTAINABLE APPROACHES TO SELF-REGULATED LEARNING IN SCHOOLS**Chair**

Christian Brandmo, University of Oslo, Norway

Effects of in-service teacher training on professional competences in self-regulated learning

Carmen Nadja Hirt, University of Applied Sciences and Arts Northwestern Switzerland (FHNW), Switzerland; Tabea Daria Eberli, University of Applied Sciences and Arts Northwestern Switzerland PH (FHNW), Switzerland; Johannes Jud, University of Zurich, Switzerland; Amina Rosenthal, University of Applied Sciences Northwestern Switzerland, Switzerland; Yves Karlen, University of Zurich, Switzerland

Relating Teacher Views of Self-Regulated Learning with Classroom Practices and Students' SRL

Nancy Perry, University of British Columbia, Canada; Marissa Hall, The University of British Columbia, Canada; Xinke Wan, University of British Columbia, Canada; Martin Dammert, The University of British Columbia, Canada; Hazel Ryan Sheehan, The University of British Columbia, Canada; Lynda Hutchinson, King's University College at the University of Western Ontario, Canada

Professionalizing teachers on SRL: School counselors' perspectives on barriers and opportunities

Lies Backers, Ghent University, Belgium; Hilde Van Keer, Ghent University, Belgium

A multi-site video study exploring self-regulation strategies to foster 21st century skills

Therese Hopfenbeck, University of Melbourne, Australia; Samantha-Kaye Johnston, The University of Oxford, United Kingdom; Joshua McGrane, The University of Melbourne, United Kingdom; Juliet Scott-Barrett, University of Oxford, United Kingdom; Tracey Denton-Calabrese, University of Oxford, United Kingdom

Session E: 24

Time: 12:00-13:30

Location: UOM_R02

POSTER PRESENTATION: USING FEEDBACK IN TEACHING AND ASSESSMENT**Chair**

Annika Käck, Stockholm University, Sweden

A New Measure for Assessing Teacher Education Students' Peer Feedback Beliefs

Marit Puusepp, University of Tartu, Estonia; Piheil Hunt, University of Tartu, Estonia; Gerli Silm, University of Tartu, Estonia

Noticing, awareness, modes of cognition: An integrated model for teachers' professional development

Els Boshuizen, Open University of the Netherlands, Netherlands; Charlotte Eliza Wolff, University of Iceland - School of Education, Iceland; Karel Kreijns, Open University of the Netherlands, Netherlands; Dorothy Duchatelet, Open Universiteit, Department of Online Learning and Instruction, Netherlands; Halszka Maria Jarodzka, Open Universiteit, Department of Online Learning and Instruction, Netherlands

A scoping review of research on reduced grading

Dan-Anders Normann, Norwegian University of Science and Technology (NTNU), Norway; Lise Vikan Sandvik, Norwegian University of Science and Technology (NTNU), Norway; Henning Fjørtoft, Norwegian University of Science and Technology (NTNU), Norway

Students' feedback engagement, feedback perceptions and individual characteristics

Mona Bassleer, Ghent University, Belgium; Nicolas Dirix, Ghent University, Belgium; Stijn Schelfhout, Ghent University, Belgium; Wouter Duyck, Ghent University, Belgium

Revealing teachers' conceptualizations of student identity and development: A connection to practice

Emily Gonzalez, University of Southern California, Rossier School of Education, United States; Christina Kundrak, University of Southern California, United States; Mary Helen Immordino-Yang, University of Southern California, United States

Session E: 25

Time: 12:00-13:30

Location: UOM_R03

POSTER PRESENTATION: COLLABORATIVE LEARNING

Chair

Marjaana Veermans, University of Turku, Finland

How do groups learn in a virtual space? Didactic and social implications of breakout rooms

Sabrina Gerth, University College of Teacher Education Tyrol, Austria; Mario Vötsch, University College of Teacher Education Tyrol, Austria; Anja Steiner, University College of Teacher Education Tyrol, Austria; Gerlinde Schwabl, University College of Teacher Education Tyrol, Austria

A Digitally Enhanced Primary School Mathematic Classroom – A Case-Study

Frauke Kesting, SCRIPT, Luxembourg; Catalina Lomos, LISER - Luxembourg Institute for Socio Economic Research, Luxembourg; Sibel Telli, Canakkale Onsekiz Mart University (COMU), Turkiye; Undine Seineke, Luxembourg Institute of Socio-Economic Research (LISER), Luxembourg

The influence of collaborative hybrid learning on students' competence development and interaction

Sari Pramila-Savukoski, University of Oulu, Finland; Raila Kärrä, University of Oulu, Finland, Finland; Heli-Maria Kuivila, University of Oulu, Finland, Finland; Ashlee Oikarainen, University of Oulu, Finland, Finland; Tiina Susanna Törmänen, University of Oulu, Finland; Jonna Juntunen, University of Oulu, Finland, Finland; Sanna Järvelä, University of Oulu, Finland; Kristina Mikkonen, University of Oulu, Finland, Finland

International partnership in cooperation for democratic values in primary education

Natalia Demeshkant, Pedagogical University of Krakow, Poland; Stefanie Schnebel, University of Education Weingarten, Germany; Katarzyna Potyrala, Pedagogical University of Cracow, Poland; Mareike Brehmer, University of Agder, Norway; Hilke Rapp, PH Weingarten, Germany; Aslaug Kristiansen, University of Agder, Norway; Inger Marie Dalehefte, University of Agder, Norway; kristin endresen-maharaj, University of Agder, Norway; Georg Kristoffer Fjalsett, University of Agder, Norway; Marion Visotschnig, Pädagogische Hochschule Weingarten, Germany

The socio-materiality of learning through Minecraft education during the pandemic: a case study

Giuseppe Ritella, University of Campania Luigi Vanvitelli, Italy; Ivana Lorusso, University of Foggia, Italy; Maria Beatrice Ligorio, University of Bari, Italy

Back to the Future: Cooperation as a Forgotten Art During the Pandemic

Petra Juen, Institut für Praktische Theologie, Fachbereich Religionspädagogik, - didaktik und Katechetik, Austria

Session E: 26

Time: 12:00-13:30

Location: UOM_R04

POSTER PRESENTATION: MATHEMATICS AND NUMERACY IN PRIMARY EDUCATION

Chair

Krzysztof Cipora, Loughborough University, United Kingdom

Pilot Study for the Validation of the Number Sense Brief for the Brazilian Context

Luciana Vellinho Corso, Universidade Federal do Rio Grande do Sul (UFRGS), Brazil; Fabiana de Miranda Rocha Luna, Universidade Federal do Rio Grande do Sul, Brazil; Amanda Oliveira Meggiato, Universidade Federal do Rio Grande do Sul, Brazil; RAQUEL WEBER, Universidade Federal do Rio Grande do Sul, Brazil

The Development of Early Numeracy as a Predictor of Math Skills in Primary School

Veronique Dierckx, University Utrecht, Netherlands; Bernadette van de Rijt, University Utrecht, Netherlands; Sietske van Viersen, University Utrecht, Netherlands

The relation between primary school students' adaptive number knowledge and proportional reasoning

Salla Pehkonen, University of Jyväskylä, Finland; Antti Lehtinen, University of Jyväskylä, Finland; Pasi Nieminen, University of Jyväskylä, Finland; Markus Hähkiöniemi, University of Jyväskylä, Finland

Coding in elementary school mathematics lessons? That works!

Jens Dennyhard, University of Education Heidelberg, Germany; Saskia Schreiter, University of Education Heidelberg, Germany

6-year-olds' different ways of reasoning about a larger collection of items

Anna-Lena Ekdahl, Jönköping University, Sweden

Developmental trajectories of initial abilities of children according to socioeconomic status

María Victoria Velasco, Pontificia Universidad Católica de Chile, Chile

Session E: 27

Time: 12:00-13:30

Location: UOM_A06

WORKSHOP: A PARTICIPATORY WORKSHOP EXPLORING INSTITUTIONAL GATEKEEPING IN DOCTORAL PROGRAMME ADMISSIONS

A Participatory Workshop Exploring Institutional Gatekeeping in Doctoral Programme Admissions

- Dangen, Newcastle University, United Kingdom; Sophia Kier-Byfield, University of Warwick, United Kingdom; James Burford, University of Warwick, United Kingdom; Emily Henderson, University of Warwick, United Kingdom; Ahmad Akkad, University of Warwick, United Kingdom

Session E: 28

Time: 12:00-13:30

Location: UOM_R05

ICT DEMONSTRATION: MINING DIGITAL LEARNING DATA IN EDUCATION: A STEP-BY-STEP-GUIDE USING WORDPRESS**Mining Digital Learning Data in Education: A Step-by-Step-Guide Using WordPress**

Marvin Roski, Leibniz University of Hannover, Institute for Science Education, Germany; Andreas Nehring, Gottfried Wilhelm Leibniz Universität Hannover, Germany

Session F: 1

Time: 14:45-16:15

Location: HELEXPO_CC

INVITED SYMPOSIUM: INVESTIGATING TECHNOLOGY INTEGRATION IN LEARNING ACTIVITIES THROUGH THE LENS OF THE ICAP MODEL**Chair**

Dominik Petko, University of Zurich, Switzerland

Organiser

Alberto Cattaneo, Swiss Federal University for Vocational Education and Training, Switzerland

Discussant

Paolo Raviolo, Ecampus University (IT), Italy

Learning Activities in Technology-enhanced Learning: A Systematic Review of Meta-Analyses

Michael Sailer, LMU Munich, Germany

Integration of Technology in Interactive, Constructive, Active and Passive Learning Activities

Chiara Antonietti, Swiss Federal University for Vocational Education and Training (SFUVET), Switzerland

Exploring Technology-enhanced Learning Activities in Higher Education and their Effects on Students

Christina Wekerle, University of Augsburg, Germany

How to Promote High-Quality Technology-Enhanced Teaching Through Teacher Professional Development?

Tim Fütterer, University of Tübingen, Germany

ANNOTATIONS:
SIG 6 INVITED SYMPOSIUM

Session F: 2

Time: 14:45-16:15

Location: UOM_CH

INVITED SYMPOSIUM: RELIGIONS AND WORLDVIEWS IN EDUCATION PROVIDING HOPE OF SOCIAL SUSTAINABILITY**Chair**

Martin Ubani, University of Eastern Finland, Finland

Organisers

Martin Ubani, University of Eastern Finland, Finland; Alexander Unser, TU Dortmund University, Germany; Sarah Delling, University Siegen, Germany

Discussant

VASILIKI MITROPOULOU, Aristotle University Thessaloniki, Greece

Theologies, Religion and Literacy: Towards Socially Sustainable Religious Education?

Martin Ubani, University of Eastern Finland, Finland

A digital response-tool to grasp personal orientations underlying sustainability conflicts

Stefan Altmeyer, Johannes Gutenberg University Mainz, Germany

Diversity as an Element of Social Cohesion – the Findings of an Empirical Research

Eszter Kodacsy-Simon, Lutheran Theological University in Budapest, Hungary; Etelka Seres-Busi, Lutheran Theological University in Budapest, Hungary

Existential Resilience and Well-being, Hope and Meaning: Cultivating Existential Sustainability

Arniika Kuusisto, University of Helsinki, Finland

ANNOTATIONS:
SIG 19 INVITED SYMPOSIUM

Session F: 3

Time: 14:45-16:15

Location: UOM_R08

SYMPOSIUM: EXAMINING THE VALIDITY OF STANDARDIZED APPROACHES TO MEASURING TEACHING QUALITY**Chair**

Mark White, University of Oslo, Norway

Discussant

Anna-Katharina Praetorius, University of Zurich, Switzerland

Students' Perceptions of Teaching Quality in In-person Classrooms and Distance Education

Ann-Kathrin Jaekel, University of Tuebingen, Germany; Richard Goellner, University of Tuebingen, Germany

Student Perceptions as Indicator of Teaching Quality: A Report from Nordic Classrooms

Berglind Gisladdottir, University of Iceland School of Education, Iceland; Michael Tengberg, Karlstad University, Sweden; Astrid Roe, University of Oslo, Faculty of Education, Norway; Anders Stig Christensen, UCL University College, Denmark, Denmark

Classroom Observation Ratings of Teaching Quality – An Investigation of a Teacher Training

Tosca Daltoè, University of Tübingen, Germany; Julia Maier, University of Tübingen, Germany; Evelin Ruth-Herbein, University of Tübingen, Germany; Richard Goellner, University of Tuebingen, Germany; Ulrich Trautwein, University of Tübingen, Germany; Benjamin Caspar Fauth, University of Tübingen, Germany

Evaluating the Robustness of Observational Studies' Results to Rater Error with a Linking Data Set

Mark White, University of Oslo, Norway

Session F: 4

Time: 14:45-16:15

Location: AUTH_TE2

SYMPOSIUM: BRINGING JOURNAL WRITING, LEARNING BY EXPLAINING, PEER-TUTORING IN A DIALOGUE**Chair**

Ai Miyamoto, University of Freiburg, Germany

Organiser

Ai Miyamoto, University of Freiburg, Germany

Discussant

Vincent Hoogerheide, Utrecht University, Netherlands

Digital journal writing: Cognitive, but not metacognitive prompts enhance comprehension and transfer

Veit Kubik, University of Würzburg, Germany; Markus H. Hefter, Bielefeld University, Germany; Matthias Nückles, University of Freiburg, Germany; Kirsten Berthold, University of Bielefeld, Germany

Writing or speaking? The role of medium in the effectiveness of learning journals

Florian Luft, University of Freiburg, Germany; Ai Miyamoto, University of Freiburg, Germany; Matthias Nückles, University of Freiburg, Germany

The role of prompts and medium in the effects of learning by explaining on students' comprehension

Ai Miyamoto, University of Freiburg, Germany; Matthias Nückles, University of Freiburg, Germany

Effects of a high school peer-tutoring program on students' understanding and learning strategy use

Tatsushi Fukaya, Hiroshima University, Japan

Session F: 5

Time: 14:45-16:15

Location: AUTH_DC2

SYMPOSIUM: CHALLENGING THE NARROW DEFINITIONS OF DIVERSE STUDENTS' SENSE OF BELONGING IN HIGHER EDUCATION**Chair**

Pieter van Lamoen, Erasmus University Rotterdam, the Netherlands, Netherlands

Organiser

Aike Dias-Broens, Erasmus University Rotterdam, Netherlands

Discussant

Kim Ouwehand, Erasmus University Rotterdam, Netherlands

A systematic literature review about the sense of belonging of diverse students in higher education

Aike Dias-Broens, Erasmus University Rotterdam, Netherlands; Marieke Meeuwisse, Erasmus University Rotterdam, Netherlands; Sabne Severiens, Erasmus University Rotterdam, Netherlands

An action research approach to challenging narrow conceptions of belonging amongst students

David Gilani, Middlesex University, United Kingdom

Mature student belonging in teacher education: we're fine because you don't feel you are by yourself

Karina Ryan, Mary Immaculate College, Ireland

Student sense of belonging and early dropout – how are they related?

Claudia Gomes, Rotterdam University of Applied Sciences, Netherlands

Session F: 6

Time: 14:45-16:15

Location: AUTH_DC1

SYMPOSIUM: RESEARCH ON PREDICTORS OF GRADE RETENTION IN EUROPE: STATE OF THE ART**Chair**

Mieke Goos, KULeuven + UCLL, Belgium

Discussant

Barbara Belfi, Maastricht University School of Business and Economics, Netherlands

Do parental educational aspirations protect against grade retention?

Florian Klapproth, Medical School Berlin, Germany; Fabian Meissner, Medical School Berlin, Germany; Antoine Fischbach, Luxembourg Centre for Educational Testing, Luxembourg

Which teacher, class and school characteristics predict Flemish teachers' grade retention beliefs?

Mieke Goos, KULeuven + UCLL, Belgium; Elke Londers, UCLL, Belgium

Are teacher beliefs about interventions promoting student success related with grade retention?

Natalie de Nóbrega dos Santos, ISPA-Instituto Universitário, Portugal; Vera Monteiro, ISPA- Instituto Universitário, Portugal

The predictors of grade retention in Europe: A systematic review

Joana Pipa, ISPA - Instituto Universitário | Center for Research in Education, Portugal; Sérgio Gaitas, ISPA-Instituto Universitário / CIE - ISPA (Center for Research in Education), Portugal; Francisco Peixoto, ISPA - Instituto Universitário | Center for Research in Education, Portugal

Session F: 7

Time: 14:45-16:15

Location: AUTH_T002

SYMPOSIUM: TEACHER INTERVENTIONS ON LEARNING INTERACTION IN THE CLASSROOM**Chair**

Marja-Kristiina Lerkkanen, University of Jyväskylä, Finland

Organiser

Sigrun K. Ertesvag, University of Stavanger, Norway

Discussant

Pamela Sammons (Greet), University of Oxford, United Kingdom

Beginning teacher students' understandings and expressions of classroom management

Karin Street, Western Norway University of Applied Sciences, Norway; Sigrun K. Ertesvag, University of Stavanger, Norway; Siv Måseidvåg Gamlem, Volda University College, Norway; Linda Moen Rebni, Western Norway University of Applied Sciences, Norway; Randi M. Solvik, University of Stavanger, Norway; Grete Sørensen Vaaland, University of Stavanger, Norway

Enhancing interaction and assessment skills with intervention program in teacher training in Finland

Sanni Pöysä, University of Jyväskylä, Finland; Eija Pakarinen, University of Jyväskylä, Finland; Marja-Kristiina Lerkkanen, University of Jyväskylä, Finland

Leadership for learning – improving teaching among Swedish in-service teachers

Marcus Samuelsson, Department of Behavioural science and learning, Sweden; Anja Thorsten, Department of Behavioural Sciences and Learning, Sweden

Teacher stress and learning interaction quality as predictors of improvement in student engagement

Sigrun K. Ertesvag, University of Stavanger, Norway; Grete Sørensen Vaaland, University of Stavanger, Norway

Session F: 8

Time: 14:45-16:15

Location: UOM_CR

SYMPOSIUM: CRITICAL EVALUATION OF EVIDENCE AND SOURCES WHEN LEARNING FROM MULTIPLE DOCUMENTS**Chair**

Marc Stadler, Ruhr-University Bochum, Institute of Educational Science, Germany

Organiser

Marc Stadler, Ruhr-University Bochum, Institute of Educational Science, Germany

Discussant

Clark Chinn, Rutgers University, United States

Credibility Evaluation Profiles of Students Representing Primary and Secondary Education

Riikka Anttonen, Tampere University, Finland; Laura Kanninen, Tampere University, Finland; Carita Kiili, Tampere University, Finland

How do pre-service teachers use multiple documents depending on their epistemic perspectives?

Martin Greisel, University of Augsburg, Germany; Ingo Kollar, University of Augsburg, Germany

Scaffolding Students' Source Trustworthiness Evaluation

Danna Tal Savir, University of Haifa, Israel; Sarit Barzilai, University of Haifa, Israel; Fayez Abed, University of Haifa, Faculty of Education, Israel; Shiri Mor-Hagani, University of Haifa, Faculty of Education, Israel

Can 5G radiation kill birds? Promoting the use of evaluation strategies against misinformation

Philipp Marten, Ruhr University Bochum, Germany; Sandra Aßmann, Ruhr-University Bochum, Institute of Educational Sciences, Germany; Marc Stadler, Ruhr-University Bochum, Institute of Educational Science, Germany

Session F: 9

Time: 14:45-16:15

Location: UOM_A03

SINGLE PAPER: CURRICULUM DEVELOPMENT FOR SCIENCE EDUCATION**Chair**

Merle-Sophie Thielmann, University of Mannheim, Germany

STEM learning experiences as boundary objects? The Hong Kong case

Ka Lok Cheng, The University of Hong Kong, Hong Kong

Towards Defining, Assessing and Modelling Competency Levels in the Field of Stoichiometry

Krause Alexander, Gottfried Wilhelm Leibniz Universität Hannover, Germany; Andreas Nehring, Gottfried Wilhelm Leibniz Universität Hannover, Germany

Designing Social Justice Oriented Science Curricula Towards Consequential Learning

Ravit Duncan, Rutgers University, United States; Edna Tan, UNC Greensboro, United States; Rishi Krishnamoorthy, PSU, United States; Tasha Austin, Buffalo State College, United States; Frieda Reischman, Concord, United States; Sugat Dabholkar, GSE-Rutgers University, United States; Ti'Era D. Worsley, University of South Carolina-Greensboro, United States; Megumi Asada, Rutgers University, United States

Space for All: A Multinational Survey of Astronomy Education

Christine Hirst Bernhardt, University of Maryland, College Park, United States; Janelle M. Bailey, Temple University, United States

Session F: 10

Time: 14:45-16:15

Location: AUTH_T102

SINGLE PAPER: ANXIETY, STRESS AND RESILIENCE IN STUDENTS**Chair**

Tina Hascher, University of Bern, Institute of Educational Science, Switzerland

Resilience trajectories despite IPV experiences and the influence of protective factors

Dilan Aksoy, University of Applied Sciences and Arts Northwestern Switzerland PH (FHNW), Switzerland; Céline Favre, PH FHNW, Institut Forschung und Entwicklung, IFE, Switzerland; Celeste Simões, University of Lisbon, Faculty of Human Kinetics, Portugal; Petra Sidler, School of Education, FHNW, Switzerland

Resilience in adolescence over time: A Three-Wave Latent Transition Analysis on Violence-Resilience

Wassilis Kassis, School of Education, FHNW, Switzerland; Céline Anne Favre, School of Education, FHNW, Switzerland; Dilan Aksoy, School of Education, FHNW, Switzerland

Socio-emotional violence resilience – a two wave latent transition analysis

Céline Favre, PH FHNW, Institut Forschung und Entwicklung, IFE, Switzerland; Dilan Aksoy, University of Applied Sciences and Arts Northwestern Switzerland PH (FHNW), Switzerland; Wassilis Kassis, School of Education, FHNW, Switzerland

Mediation of interpersonal relationships in school stress and student academic achievement.

Olga Cuadros Jiménez, Universidad Católica Silva Henríquez, Chile; Benito León del Barco, Universidad de Extremadura, Spain

Session F: 11

Time: 14:45-16:15

Location: AUTH_DC3

SINGLE PAPER: PLAY IN EARLY CHILDHOOD EDUCATION**Chair**

Athena Daniilidou, University of Macedonia, Greece

Analysis of Teacher-Child Interactions in Tablet-Supported Episodes During Constructive Play

Jossen Priska, University of Teacher Education Lucerne (PH Luzern), Switzerland; Ueli Thomas Studhalter, University of Teacher Education Lucerne (PH Luzern), Switzerland; Marco Seeli, University of Teacher Education Lucerne (PH Luzern), Switzerland; Annette Tettenborn, University of Teacher Education of Lucerne, Switzerland

Exploring Polyadic Sustained Shared Thinking-Interactions during Free Play, Meal and Tidying Up

Alexandra Waibel, University of Teacher Education, St. Gallen, Switzerland, Switzerland

The technological landscapes with IoT toys early childhood education in Norway

Maria Dardanou, University of Tromsø, Norway

Session F: 12

Time: 14:45-16:15

Location: UOM_R09

SINGLE PAPER: EDUCATIONAL TRACKING, SCHOOL TRANSITIONS AND SCHOOL DROPOUT: SOCIAL PROCESSES**Chair**

Andreas Gegenfurtner, University of Augsburg, Germany

Stereotypes on Educational Tracks Among Secondary School Students in Flanders (Belgium)

Margo Vandenbroeck, KU LEUVEN (BE 0419.052.173), Belgium; Jonas Dockx, KU LEUVEN, Belgium; Rianne Janssen, KU LEUVEN, Belgium

Delayed tracking and the social meanings of educational tracks: an ethnographic study

Pomme van de Weerd, Utrecht University, Netherlands

Social support stability in school transitions: Associations with truancy and completing education

Tuomo Virtanen, University of Jyväskylä, Finland; Kati Vasalampi, University of Jyväskylä, Finland; Marja-Kristiina Lerkkanen, University of Jyväskylä, Finland; Jenni Pelkonen, University of Jyväskylä, Finland; Anna-Maija Poikkeus, University of Jyväskylä, Finland

School dropout: Investigating pathways of academic achievement and psychosocial learning environment

Maren Tvedt, University of Stavanger, Norway; Edvin Bru, University of Stavanger, Norway

Session F: 13

Time: 14:45-16:15

Location: UOM_A13

SINGLE PAPER: ENVIRONMENTAL EDUCATION AND CLIMATE CHANGE**Chair**

Mari Nygård, NTNU, Norway

Friluftsliv in Teacher Education – a step towards Environmental Awareness

Helga Aadland, Western Norway University of Applied Sciences, Faculty of Education, Arts and Sports, Norway; Joergen Nerland, Western Norway University of Applied Sciences, Norway; Trond Egil Arnesen, Western Norway University of Applied Sciences, Norway

Climate change discourses on social media: Clarifying the potential of relevant literacies

Catharina Philine Pfeiffer, Leibniz University Hanover, Germany; Stefanie Dr. Lenzer, Leibniz University of Hannover, Institute for Science Education, Germany; Andreas Nehring, Gottfried Wilhelm Leibniz Universität Hannover, Germany

Elementary students' understanding and changing discourse about climate change

Gertraud Benke, Klagenfurt University, Austria

Teaching psychology with science-fiction at the Bachelor level

Laure KLOETZER, Institute of Psychology & Education, University of Neuchâtel, Switzerland

Session F: 14

Time: 14:45-16:15

Location: UOM_A08

SINGLE PAPER: PROMOTING CHILDREN'S SELF-REGULATION: INDIVIDUAL, PARENTAL AND TEACHER FACTORS**Chair**

Daniel Mujs, Queen's University Belfast, United Kingdom

Maternal contingency and their relation to preschoolers' problem-solving and strategic behaviors

Maren Stern, Heidelberg University, Germany; Leonie Köllbichler, University of Heidelberg, Germany; Silke Hertel, Ruprecht-Karls-Universität Heidelberg, Germany

The Role of Kindergartners Private Practice in Self-Regulation and Phonological Awareness in English

Ana Paula S. Loures-Elias, Interdependent Researcher, Portugal; Marília Mendes Ferreira, University of Sao Paulo, Brazil

Regulating Emotions to Improve the Quality of Teaching and Learning in the Early Years

Erika Galea, University College London, Institute of Education, Malta

Do Primary School Teachers Know How Accurately Their Students Monitor and Regulate Their Learning?

Tamara Van Gog, Utrecht University, Netherlands; Sophie Oudman, Utrecht University, Netherlands; Janneke van de Pol, Utrecht University, Netherlands; Mariette van Loon, University of Zurich, Switzerland

ANNOTATIONS:

PLEASE NOTE THAT THIS SESSION ROOM HAS CHANGED FROM AUTH_TE1 TO UOM_A08.

Session F: 15

Time: 14:45-16:15

Location: AUTH_T202

SINGLE PAPER: STUDENTS' INTEREST AND CURIOSITY**Chair**

Morane Stevens, KU Leuven - University of Leuven, Belgium

How intellectual curiosity and interest manifest in information seeking and knowledge attainment

Aki Schumacher, Hector Research Institute of Education Sciences and Psychology, University of Tübingen, Germany; Yvonne Kammerer, Stuttgart Media University, Stuttgart, Germany, Germany; Christian Scharinger, Leibniz-Institut für Wissensmedien, Germany; Steffen Gottschling, Leibniz-Institut für Wissensmedien (IWM), Germany; Tobias Appel, Hector Research Institute of Education Sciences and Psychology, Germany; Lisa Bardach, University of Tübingen, Germany

The associations between children's trait and state curiosity

Jamie Jirout, University of Virginia, United States; Natalie Evans, University of Virginia, United States; Virginia Vitiello, University of Virginia, United States; Sharon Zumbrunn, Virginia Commonwealth University, United States

Integrating two lines of research on how children's state curiosity relates to their learning

Tessa van Schijndel, University of Amsterdam, Netherlands; Brenda Jansen, University of Amsterdam, Netherlands

What do Chinese students perceive and experience about curiosity in schools?

Xin Tang, Shanghai Jiao Tong University, China; Huier Zheng, University College London, United Kingdom

Session F: 16

Time: 14:45-16:15

Location: UOM_A10

SINGLE PAPER: PARENTAL INVOLVEMENT IN LITERACY DEVELOPMENT**Chair**

Wilfried Admiraal, Oslo Metropolitan University, Norway

Idioms exposure in shared book reading and child vocabulary growth: An exploratory study

JUNYI YANG, University of Oslo, Norway; Vibeke Grover, University of Oslo, Norway; Joshua Lawrence, University of Oslo, Norway

Parent-Child Picture Book Co-creations as a Blessing in Uncertain Times

Wai Ming Cheung, The University of Hong Kong, Hong Kong; Serene Chan, The University of Hong Kong, Hong Kong

Like mother/father, like daughter/son? Comparing caregivers shared reading to kindergarteners

Roel van Steensel, Erasmus University Rotterdam, Netherlands

Patterns of infants' home literacy environment: threshold effects of family social risk factors

Sabine Blaurock, Otto-Friedrich-University of Bamberg, Germany; Luisa Prokupek, Otto-Friedrich-University of Bamberg, Germany; Yvonne Anders, Otto-Friedrich-University of Bamberg, Germany

Session F: 17

Time: 14:45-16:15

Location: UOM_A02

SINGLE PAPER: USING EYE TRACKING FOR STUDENTS WITH AND WITHOUT LEARNING DIFFICULTIES**Chair**

Antti Lehtinen, University of Jyväskylä, Finland

Strategies of students with learning difficulties in math number line tasks: An eye-tracking study

Anna Lisa Simon, Universität zu Köln/ University of Cologne, Germany; Maïke Schindler, Universität zu Köln/ University of Cologne, Germany

Sublexical Processing in Finnish Typical and Compromised Reading Development

Lisa Hintermeier, University of Jyväskylä, Finland; Mikko Aro, University of Jyväskylä, Finland

Designing accessible assessment tasks: Impacts on student performance and engagement

Callula Killingly, Queensland University of Technology, Australia; Linda Graham, Queensland University of Technology, Australia; Sonia White, Queensland University of Technology, Australia; Naomi Sweller, Macquarie University, Australia

Comparing Continuous and Discretized Tape Diagrams of Fractions: An Eye-Tracking Study with Adults

Sabrina Schwarzmeier, Technical University of Munich, Germany; Andreas Obersteiner, Technical University of Munich, Germany; Martha Wagner Alibali, University of Wisconsin-Madison, United States; Vijay Marupudi, Georgia Institute of Technology, United States

Session F: 18

Time: 14:45-16:15

Location: UOM_R03

POSTER PRESENTATION: TEACHER PROFESSIONAL DEVELOPMENT**Chair**

Julia Klug, PH Salzburg, Austria

Professional Knowledge in Pre-Service Teacher Education in Social Sciences: the SoWi-L study

Sabine Manzel, Universität Duisburg-Essen, Cote D'Ivoire; Dorothee Gronostay, TU Dortmund University, Germany

Challenges of teacher educators in integrating research competence in graduation assignments

Belinda Ommering, Utrecht University of Applied Sciences, Netherlands; Marloes van Dijk, Marnix Academie (PABO), Netherlands; Lisette Munneke, Utrecht University of Applied Sciences, Netherlands; Marjolijn Peltenburg, Marnix Academie, Netherlands; Miranda Timmermans, Marnix University of applied sciences, Netherlands

What quality features make online professional development for teachers effective?

André Meyer, University of Potsdam, Germany; Marc Kleinknecht, Leuphana University Lueneburg, Germany; Dirk Richter, University of Potsdam, Germany

Teacher Design Teams in secondary vocational education

Tina Gryson, Ghent University, Belgium; Katrien Strubbe, Ghent University, Belgium; Tony Valcke, Ghent University, Belgium; Ruben Vanderlinde, Ghent University, Belgium

Social networks and key moments of student teachers' learning during internship

Marco Galle, University of Teacher Education Lucerne, Switzerland; Annelies Kreis, University of Teacher Education Lucerne (PH Luzern), Switzerland; Sonja Hiebler, University of Teacher Education Lucerne (PH Luzern), Switzerland; Esther Brunner, Thurgau University of Teacher Education, Kreuzlingen (PHTG), Switzerland; Sanja Stankovic, University of Teacher Education Thurgau, Switzerland

Virtual Reality as a Catalyst in the Transition Towards Student-Centred Methods and Beliefs

Sebastien Wall-Lacelle, University of Montreal, Canada; Bruno Poellhuber, University of Montreal, Canada; Christine Marquis, Cégep de Saint-Jérôme, Canada; Normand Roy, University of Montreal, Canada

Teachers' professional growth in teaching social scientific reasoning

Thomas Klijnsma, University of Amsterdam, Netherlands; Gerhard Stoel, Radboud University, Nijmegen, Netherlands; Geerte Savenije, University of Amsterdam, Netherlands; Gerard Ruijs, University of Amsterdam, Netherlands; Carla Van Boxtel, University of Amsterdam, Netherlands

Session F: 19

Time: 14:45-16:15

Location: UOM_R01

POSTER PRESENTATION: SELF-REGULATED LEARNING AND BEHAVIOUR**Chair**

Ingvill Rasmussen, University of Oslo, Norway

Developing Self-Regulation as a Core Competency of Social-Emotional Learning: Action Research

Ronen Kasperski, Gordon College of Education, Israel; Merav Hemi, Gordon Academic College, Israel; Ditz Maskit, Gordon Academic College, Israel

SRL Practices Growth Following Authentic Experience Program: One Teacher's Long Term Case Study

Orna Heaysman, Hemdat College of Education, Israel; Bracha Kramarski, Bar-Ilan University, Israel

Enhancing student self-regulation through programmatic assessment

Niels Bohnen, HAS University of Applied Science, Netherlands; Suzan van Ierland, HAS University of Applied Sciences, Netherlands

Development of metacognitive monitoring in primary school and its association with achievement

Elien Bellon, KU Leuven, Belgium; Wim Fias, Ghent University, Belgium; Bert De Smedt, KU Leuven, Belgium

First-Graders' Persistence of Overconfidence Despite Feedback

Kristin Kolloff, University of Bern, Switzerland

Pre-service teachers' self-regulated learning skills and skills to scaffold self-regulated learning

Piia Naykki, University of Jyväskylä, Finland; Laura Hirsto, University of Eastern Finland, Finland; Marjaana Veermans, University of Turku, Finland

Session F: 20

Time: 14:45-16:15

Location: UOM_R02

POSTER PRESENTATION: VOCATIONAL AND WORKPLACE LEARNING**Chair**

Garvin Brod, DIPF | Leibniz Institute for Research and Information in Education, Germany

Antecedents and Effects of Boredom during Classroom Instruction at Vocational Schools

Katrin Rehr, Paris - Lodron University Salzburg, Austria

Using desktop virtual reality simulation in nursing education: a cluster randomized controlled trial

Minna Ruoranen, University of Jyväskylä, Finland; Ville Heilala, University of Jyväskylä, Finland; Jaana Mäkelä, JAMK University of Applied Sciences, Finland; Jeri Varjosalo, University of Jyväskylä, Finland; Paavo Rätty, University of Jyväskylä, Finland; Katriina Sipiläinen, University of Jyväskylä, Finland; Toni Pekkola, JAMK University of Applied Sciences, Finland; Tommi Kärkkäinen, University of Jyväskylä, Finland; Raija Hämäläinen, University of Jyväskylä, Finland

Justifying the diploma decision differently: how do teacher teams design their new assessment plan?

Judith Gulikers, Wageningen University, Netherlands; Liesbeth Baartman, University of Applied Sciences Utrecht, Netherlands

Developing Relational Work as a Design Tool in activities with health professionals

Koula Charitonos, The Open university UK, United Kingdom; Littlejohn Allison, University College London, United Kingdom; Saraswati Dawadi, The Open University, United Kingdom, United Kingdom; Abhinav Vaidya, Public Health Research Development Nepal / Kathmandu Medical College, Nepal; Santosi Giri, Public Health Research Development Nepal, Nepal; Alex Owusu-Ofori, Kwame Nkrumah University Of Science and Technology, Ghana; Fereshte Goshtasbpour, The Open University, United Kingdom, United Kingdom

Session F: 21

Time: 14:45-16:15

Location: UOM_R04

POSTER PRESENTATION: MOTIVATION, INTEREST AND ACHIEVEMENT

Chair

Annabel Watson, University of Exeter, United Kingdom

The development of math competence and its relation to math interest

Triinu Kilp-Kabel, Tallinn University, Estonia

Value and Utility: What Students Learn and Transfer from a Graduate Motivation Course

BOBBY HOFFMAN, University of Central Florida, United States

Interests and motivation in secondary education in Flanders

Merel Dutry, Ghent University, Belgium; Laura de Ruijter, Ghent University, Belgium; Nicolas Dirix, Ghent University, Belgium; Stijn Schelthout, Ghent University, Belgium; Wouter Duyck, Ghent University, Belgium

Promoting interest in high school science among Palestinian students in East Jerusalem

Mohamed Amine Mahhou, University of Quebec in Montreal, Canada; Olivier Arvisais, Université du Québec à Montréal (UQAM), Canada; Patrice Potvin, Université du Québec à Montréal, Canada

A Study on the Effectiveness of Encouragement from Friends in Recoverable Failure Situations

Maki Nakamura, Kagoshima University, Japan; Kumiko Yoshitake, Nagasaki Junshin Catholic University, Japan; Maori Urakawa, Nagasaki Junshin Catholic University, Japan

The effects of cognitive and noncognitive skills on achievement in higher education: SEM analysis

Sofie Van Cauwenberghe, Ghent University, Belgium; Nicolas Dirix, Ghent University, Belgium; Stijn Schelthout, Ghent University, Belgium; Wouter Duyck, Ghent University, Belgium

Epistemic Beliefs and Interest as Predictors of Student Teachers' Attitudes towards Deep Learning

Christian Brandmo, University of Oslo, Norway; Helge I. Stromso, University of Oslo, Norway; Øistein Anmarkrud, University of Oslo, Norway; Leila Ferguson, Kristiania University College, Norway; Ivar Bråten, University of Oslo, Norway

Session F: 22

Time: 14:45-16:15

Location: UOM_GYM

ROUNDTABLE: EYE TRACKING IN INSTRUCTION AND ASSESSMENT

Chair

Jimmy van Rijt, Tilburg University, Netherlands

Teaching Visual Problem-Solving: Understanding how Experts Transfer Visual Expertise to Novices

Christine Nooijen, Erasmus University Rotterdam, Netherlands

Investigating pre-service teachers' sense-making of educational dashboards using multichannel data

Clara Schumacher, Humboldt Universität zu Berlin, Germany; Roger Azevedo, University of Central Florida, United States; Dirk Ifenthaler, University of Mannheim, Germany

Using Multimodal Data to Diagnose Probabilistic Misconceptions via an Online Diagnostic Tool

Daryn Dever, University of Central Florida, United States; Roger Azevedo, University of Central Florida, United States

Session F: 23

Time: 14:45-16:15

Location: UOM_A04

WORKSHOP: REINVIGORATING READING AS AN IMAGINATIVE, VITAL EXPERIENCE FOR YOUNG PEOPLE

Reinvigorating reading as an imaginative, vital experience for young people

Amanda McGraw, Federation University Australia, Australia

Session F: 24

Time: 14:45-16:15

Location: UOM_R05

WORKSHOP: BUILDING BRIDGES BETWEEN RESEARCH AND SCHOOLS: FEEDBACK TO PRIMARY EDUCATION TEACHERS ON HANDWRITING

Building bridges between research and schools: Feedback to primary education teachers on handwriting

Irene Ibarra, University of the Basque Country, Spain; Asuncion Martinez-Arbelaz, University of the Basque Country, UPV/EHU, Q 4818001B, Spain; Jose Maria Arriola, University of the Basque Country, Spain

ANNOTATIONS:

THIS SESSION WILL TAKE PLACE IN ROOM UOM_W INSTEAD OF ROOM UOM_R05.

Session F: 25

Time: 14:45-16:15

Location: UOM_A07

WORKSHOP: KNOWING YOUR ABCS: ASSET BASED COMMUNICATION FOR ACTIONABLE LEARNING INTERVENTIONS**Knowing Your ABCs: Asset Based Communication for Actionable Learning Interventions**

Angela Stewart, University of Pittsburgh, United States; LuEttaMae Lawrence, Utah State University, United States; Nikki Lobczowski, McGill University, Canada; Stephen Hutt, University of Denver, United States

Session G: 1

Time: 17:00-18:30

Location: AUTH_CH

INVITED SYMPOSIUM: PHASES OF INQUIRY IN PRACTICE: CONTEXTS AND VARIATIONS**Chair**

ANASTASIOS CHOVDARDAS, University of Cyprus, Greece

Organisers

Koen Veermans, University of Turku, Finland; Valentina Nachtigall, Ruhr University Bochum, Germany

Discussant

Margus Pedaste, University of Tartu, Estonia

Problematising a linear conceptualization of inquiry learning

ANASTASIOS CHOVDARDAS, University of Cyprus, Greece

Mathematical Modelling With Hands-on Experimentation as a Possibility for Inquiry Learning

Ramona Hagenkötter, Ruhr-University Bochum, Germany; Valentina Nachtigall, Ruhr University Bochum, Germany; Katrin Rolka, Ruhr University Bochum, Germany; Nikol Rummel, Ruhr University Bochum, Germany

Enrichment for talented students: Scientific inquiry competencies in primary schools

Ulrich Trautwein, University of Tübingen, Germany

Refining Phases of Inquiry: bridging between model and practice

Koen Veermans, University of Turku, Finland; Antti Lehtinen, University of Jyväskylä, Finland; Tomi Jaakkola, Tampere University, Finland; Wouter Joolingen, Utrecht University, Netherlands

ANNOTATIONS:
SIG 20 INVITED SYMPOSIUM

Session G: 2

Time: 17:00-18:30

Location: UOM_CH

SYMPOSIUM: UNDERSTANDING AND OPTIMIZING EFFECTS OF RETRIEVAL PRACTICE IN EDUCATION**Chairs**

Niklas Obergassel, Ruhr University Bochum, Germany; Sterre Ruitenburg, Open Universiteit, Department of Online Learning and Instruction, Netherlands

Organisers

Gino Camp, Open Universiteit, Department of Online Learning and Instruction, Netherlands; Julian Roelle, Ruhr University Bochum, Germany

Discussant

Vered Halamish, Bar-Ilan University, Israel

Effects of Retrieval Practice and Summarization on Retention and Comprehension in Primary Education

fieke ophuis, Open Universiteit, Department of Online Learning and Instruction, Netherlands; Leen Catrysse, Open Universiteit, Department of Online Learning and Instruction, Belgium; Lucia Rozendal, Open University of the Netherlands, Netherlands; Desirée Joosten-ten Brinke, Open University of the Netherlands, Netherlands; Gino Camp, Open Universiteit, Department of Online Learning and Instruction, Netherlands

Worked-Examples and Retrieval Practice in Primary School Students' Mathematical Problem-Solving

Sterre Ruitenburg, Open Universiteit, Department of Online Learning and Instruction, Netherlands; Gino Camp, Open Universiteit, Department of Online Learning and Instruction, Netherlands; Kevin Ackermans, Open Universiteit, Department of Online Learning and Instruction, Netherlands; Paul Kirschner, kirschner-ED / Open Universiteit, Department of Online Learning and Instruction, Netherlands; Halszka Maria Jarodzka, Open Universiteit, Department of Online Learning and Instruction, Netherlands

Benefits of Retrieval Practice with Stepwise Multiple-Choice Questions: A Study in Primary Education

Gesa van den Broek, Utrecht University, Netherlands; Gerard Hoogenhout, Utrecht University, Netherlands; Laurie Kist, Utrecht University, Netherlands; Liesbeth Kester, Utrecht University, Netherlands; Tamara Van Gog, Utrecht University, Netherlands

Effects of Combining Retrieval Practice and Generative Learning Tasks

Niklas Obergassel, Ruhr University Bochum, Germany; Alexander Renkl, University of Freiburg, Germany; Tino Endres, University of Freiburg, Germany; Matthias Nückles, University of Freiburg, Germany; Shana Carpenter, Iowa State University, United States; Julian Roelle, Ruhr University Bochum, Germany

Session G: 3

Time: 17:00-18:30

Location: AUTH_DC3

SYMPOSIUM: TEACHER COMPETENCE TO SEE AND ENGAGE IN MATHEMATICAL THOUGHT WITH THEIR PRESCHOOLERS**Chair**

Simone Dunekacke, Freie Universität Berlin, Germany

Organisers

Joke Torbeyns, KU Leuven, Belgium; Simone Dunekacke, Freie Universität Berlin, Germany

Discussant

Esther Brunner, Thurgau University of Teacher Education, Kreuzlingen (PHTG), Switzerland

Preschool teacher competencies when sharing a picture book in view of mathematical development

Joke Torbeyns, KU Leuven, Belgium; Emke Op 't Eynde, KU LEUVEN, Belgium; Fien Depaepe, KU Leuven, Belgium; Lieven Verschaffel, KU Leuven, Belgium

Pre-service EC teacher's situation-specific skills: An insight in quantity and quality

Simone Dunekacke, Freie Universität Berlin, Germany; Lisa Starcke, Freie Universität Berlin, Germany; Julia Barenthien, Universität Hamburg, Germany; Mirjam Steffensky, Universität Hamburg, Germany; Aiso Heinze, Leibniz Institute for Science and Mathematics Education, Germany

Early childhood teachers' competence to identify mathematics in picture books

Iliada Elia, University of Cyprus, Cyprus; Van den Heuvel-Panhuizen Van den Heuvel-Panhuizen, Utrecht University, Netherlands & Nord University, Norway, Norway; Eleni Deliyianni, Cyprus Ministry of Education, Sports and Youth, Cyprus

Teachers' performance and toddlers' numerical learning opportunities when reading picture books

Camilla Björklund, University of Gothenburg, Sweden; Hanna Palmér, Linnaeus University, Sweden

Session G: 4

Time: 17:00-18:30

Location: UOM_A02

SYMPOSIUM: THE EMERGENCE OF CREATIVITY WITHIN AND BETWEEN INDIVIDUALS AND ITS EDUCATIONAL IMPLICATIONS**Chair**

Evelyn Kroesbergen, Radboud University, Netherlands

Organisers

Honghong Bai, Tsinghua University, China; Kim van Broekhoven, Erasmus University Rotterdam, Netherlands

Discussant

Mare van Hooijdonk, Radboud University Nijmegen, Netherlands

Creativity in dialogues: Parents vs. strangers, who can better support idea generation in children?

Honghong Bai, Tsinghua University, China; Luk Shu Chan, Faculty of Education, University of Hong Kong, Hong Kong; Hetao Zhang, School of Education and Information Studies, University of California, United States; Li Shang, School of Education and Information Studies, University of California, United States; Stella Christie, Tsinghua University, China

Types of talk in student teams: Enabling or stifling creative synergy in teams?

Kim van Broekhoven, Erasmus University Rotterdam, Netherlands; Evelyn Kroesbergen, Radboud University, Netherlands; Ming Ming Chiu, Department of Educational Studies, Purdue University, Hong Kong

The effect of reflective debriefs on team behavior during creative problem solving

Roni Reiter-Palmon, University of Nebraska, United States; Payge Japp, University of Nebraska at Omaha, United States; Kyle Christensen, Clemson University, United States; Marissa Shuffler, Clemson University, United States; A Patel, University of Texas, Dallas, United States; Joshua Summers, University of Texas, Dallas, United States

Everyday dynamics of students' creative engagement

Maciej Karwowski, University of Wrocław, Poland; Aleksandra Zielińska, University of Wrocław, Poland

Session G: 5

Time: 17:00-18:30

Location: UOM_A03

SYMPOSIUM: ADVANCING SRL RESEARCH WITH ARTIFICIAL INTELLIGENCE – THEORETICAL AND CONCEPTUAL FOUNDATIONS**Chair**

Sanna Järvelä, University of Oulu, Finland

Organisers

Sanna Järvelä, University of Oulu, Finland; Inge Molenaar, Radboud University Nijmegen, Netherlands

Discussant

Marcus Specht, TU Delft, Netherlands

Research on the grid: measuring self-regulated learning with multimodal data and the role of AI

Susanne de Mooij, Radboud University, Netherlands; Joni Lämsä, University of Oulu, Finland; Roger Azevedo, University of Central Florida, United States; Maria Bannert, Technical University of Munich (TUM), Germany; Dragan Gasevic, Monash University, Australia; Sanna Järvelä, University of Oulu, Finland; Inge Molenaar, Radboud University Nijmegen, Netherlands

Towards Hybrid Human-AI Regulation: Supporting Young learners' Self-regulated Learning

Inge Molenaar, Radboud University Nijmegen, Netherlands; Anne Horvers, Radboud University, Netherlands; Rick Dijkstra, Radboud University Nijmegen, Netherlands; Rianne Kooi, Radboud University Nijmegen, Netherlands; Carolien A. N. Knoop-van Campen, Radboud University Nijmegen, Netherlands

Studying and developing metrics for socially shared regulation in learning

Sanna Järvelä, University of Oulu, Finland; Andy (Khanh Xuan) Nguyen, University of Oulu, Finland; Márta Sobocinski, University of Oulu, Finland; Eija Vuorenmaa, University of Oulu, Finland, Finland; Ahsen Çini, University of Oulu, Finland

Closing the feedback loop for self-regulated learning with learning analytics

Mladen Raković, Monash University, Australia; Yizhou Fan, Peking University, China; Tongguang Li, Monash University, Australia; Shaveen Singh, Monash University, Australia; Xinyu Li, Monash University, Australia; Dragan Gasevic, Monash University, Australia

Session G: 6

Time: 17:00-18:30

Location: AUTH_DC1

SYMPOSIUM: INVESTIGATING STUDENTS' ACTIVE PARTICIPATION IN CLASSROOM DISCOURSE**Chair**

Ricardo Böheim, Technical University of Munich, Germany

Organiser

Ricardo Böheim, Technical University of Munich, Germany

Discussant

Maria Vrikki, University of Nicosia, Cyprus

Can dialogic discourse enhance student participation and student learning?

Klara Sedova, Masaryk University, Czech Republic; Martin Sedlacek, Masaryk University, Czech Republic; Roman Švaříček, Masaryk University, Czech Republic; Zuzana Salamounova, Masaryk University, Czech Republic; Tomáš Lintner, Masaryk University, Czech Republic

Promoting active participation: Examining contextual factors influencing shy students' hand raising

Lukas Mundelsee, University of Heidelberg, Germany; Susanne Jurkowski, Universität Erfurt, Germany

Hand raising and its bidirectional relationships with cognitive elaboration and self-concept

Ricardo Böheim, Technical University of Munich, Germany; Martin Daumiller, University of Augsburg, Germany; Tina Seidel, Technische Universität München, Germany

Automated hand-raising detection in classroom videos

Babette Bühler, Hector Research Institute of Education Sciences and Psychology, Germany; Ruikun Hou, University of Tübingen, Germany; Efe Bozkir, University of Tübingen, Germany; Patricia Goldberg, University of Tübingen, Germany; Peter Gerjets, Leibniz-Institut für Wissensmedien, Germany; Ulrich Trautwein, University of Tübingen, Germany; Enkelejd Kasneci, Technical University of Munich, Germany

Session G: 7

Time: 17:00-18:30

Location: UOM_CR

SYMPOSIUM: CURRENT READING RESEARCH: COVID-19 IMPACT, RISKS AND BENEFITS OF DIGITAL TECHNOLOGIES FOR READING**Chair**

Ulrich Ludewig, Institute for School Development Research, TU Dortmund University, Germany

Discussant

Danielle McNamara, Arizona State University, United States

COVID-19 Pandemic and Student Reading Achievement – Findings from a School Panel Study

Ulrich Ludewig, Institute for School Development Research, TU Dortmund University, Germany; Ruben Kleinkorres, Institute for School Development Research, TU Dortmund University, Germany; Rahim Schaufelberger, Institute for School Development Research, TU Dortmund University, Germany; Theresa Schlitter, Technical University Dortmund, Germany; Ramona Lorenz, Institute for School Development Research, TU Dortmund University, Germany; Nele McElvany, Institute for School Development Research, TU Dortmund University, Germany

Reading and Math Skills Development among Finnish Children before and after COVID-19 School Closure

Marja-Kristiina Lerkkanen, University of Jyväskylä, Finland; Eija Pakarinen, University of Jyväskylä, Finland; Jenni Salminen, University of Jyväskylä, Finland; Minna Torppa, University of Jyväskylä, Finland

Associations Between Reading Habits and Comprehension Skills in Primary School

Lidia Altamura García, University of Valencia, Spain; Ladislao Salmerón, University of Valencia, Spain; Mari Carmen Blanco, University of Zaragoza, Spain; Pablo Delgado, University of Sevilla, Spain; Victoria García, University of Valencia, Spain; Amelia Mana, University of Valencia, Spain; Sandra Montagud, University of Valencia, Spain; Johannes Naumann, University of Wuppertal, Institute for Educational Research, Germany; Luis Ramos, University of Valencia, Spain; Mario Romero, University of Valencia, Germany; Cristina Vargas, University of Valencia, Spain

The Promise of Educational Technologies in Improving Literacy Instruction and Student Outcomes

Panayiota Kendeou, University of Minnesota, United States; Kristen McMaster, University of Minnesota, United States; Danielle McNamara, Arizona State University, United States

Session G: 8

Time: 17:00-18:30

Location: AUTH_DC2

SINGLE PAPER: CREATIVITY AND DIVERGENT THINKING IN EDUCATION**Chair**

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

Effects of physical, and social environmental factors on creative thinking.

Kim Ouwehand, Erasmus University Rotterdam, Netherlands; Fred Paas, Erasmus University Rotterdam/University of Wollongong, Netherlands

Sketchnoting - visual notetaking for creative thinking and learning from educational science text

Laura Ohmes, Carl von Ossietzky University Oldenburg, Germany

Patterns of creativity in teacher-student interactions in the context of elementary science lessons

Elisa Kupers, University of Groningen, Netherlands; Astrid Menninga, University of Groningen, Netherlands; Marijn Van Dijk, University of Groningen, Netherlands

Creativity in education – an explorative study on student teachers' concepts of creativity

Laura Ohmes, Carl von Ossietzky University Oldenburg, Germany; Lena Haug, Carl von Ossietzky University Oldenburg, Germany; Uta Wagener-Praed, University of Oldenburg, Germany; Juliane Schlesier, Carl von Ossietzky University Oldenburg, Germany; Gerd Hoffmann, C.v.O. Universität Oldenburg, Germany; Barbara Moschner, Carl von Ossietzky Universität Oldenburg, Germany

Session G: 9

Time: 17:00-18:30

Location: UOM_R09

SINGLE PAPER: PLAY, LEARNING AND DEVELOPMENT**Chair**

Kalypso Iordanou, University of Central Lancashire, Cyprus

The Children's perspective of play in pre-primary and primary school settings in Finland

Taina Kyrönlampi, University Oulu, Finland; Riikka Sirkko, University of Oulu, Finland

Students' decision-making during playing educational games

Fredrik Rusk, Åbo Akademi University, Finland; Senja Cellius, Nord University, Norway; Wenche Rønning, Nord Universitet, Norway

Pre-service teachers' playfulness and its connections to the working life

Signe Pirkko Siklander, University of Oulu, Finland, Finland; Marjaana Kangas, University of Lapland, Finland; Tarja-Riitta Hurme, University of Turku, Finland; Anitta Melasalmi, University of Turku, Finland

The impact of esports on the youth from a human capital perspective: A systematic review

Samuel Kai Wah Chu, The University of Hong Kong, Hong Kong; Chenguang Du, Tangshan Normal University, China; Kevin Conn, California State University Northridge, United States; Qi Zhang, Dalian University of Finance And Economics, China

Session G: 10

Time: 17:00-18:30

Location: UOM_A10

SINGLE PAPER: TEACHER BIASES**Chair**

Susanne Narciss, TU Dresden, Germany

Debiasing (student) teachers' anchoring effects to support appropriate interpretations of evidence?

Kristina Bohrer, University of Education Karlsruhe, Germany; Kirstin Schmidt, University of Education Karlsruhe, Germany; Samuel Merk, PH Karlsruhe, Germany

Classics as a springboard? Selection bias & cognitive transfer in Flemish classical language pupils

Alexandra Vereeck, Universiteit Gent, Belgium; Wouter Duyck, Universiteit Gent, Belgium; Arnaud Szmalec, Universiteit Gent, Belgium; Katja De Herdt, Universiteit Gent, Belgium; Mark Janse, Universiteit Gent, Belgium

Learning From Texts: Effects of Instructions on Preservice Teachers' Judgment Biases

Sabine Schlag, University of Wuppertal, Germany; Jennifer Knellesen, Bergische University of Wuppertal, Germany

Dual Language Use as a Resource in Word Explanations During Shared Reading

Dilman Nomat, University of Oslo, Norway; Vibeke Grøver, University of Oslo, Norway; Veslemøy Rydland, University of Oslo, Norway

Session G: 11

Time: 17:00-18:30

Location: UOM_A13

SINGLE PAPER: WRITING: METALINGUISTIC PROCESSES AND INTERVENTIONS**Chair**

Megan Wiedbusch, University of Central Florida, United States

Student Writers' Metalinguistic Understanding of Transitions in Written Argument

Debra Myhill, University of Exeter, United Kingdom

Metalinguistic questioning: how teachers develop understanding of linguistic choice.

Ruth Newman, University of Exeter, United Kingdom

The effect of written metalinguistic feedback on cognitive effort and revision success

Jan-Mikael Rybicki, Aalto University, Finland; Wilhelmiina Hämäläinen, Aalto University, Finland; Kari K. Pitkänen, University of Helsinki, Finland; Lauri Malmi, Aalto University, Finland

ICT in effective writing interventions: an empirical review

María Victoria González Laguna, University of León, Spain; Raquel Fidalgo, University of León, Spain; Gert Rijlaarsdam, University of Amsterdam, Netherlands

Session G: 12

Time: 17:00-18:30

Location: UOM_A11

SINGLE PAPER: PARENTAL INVOLVEMENT IN LEARNING**Chair**

ELENI VASILAKI, University of Crete, Greece

How Can Parents Encourage Adolescents to Choose a Non-Gender Stereotyped High School Major?

Idit Katz, Ben-Gurion University of the Negev, Israel; Tzvia Samuha, The Ben-Gurion University of the Negev, Israel; Ortal Slobodin, Ben-Gurion University of the Negev, Israel

Parental beliefs and their influence on learning an instrument at primary school age

Patrizia Bieber, University of Tübingen, Germany; Barbara Busch, Mannheim University of Music and Performing Arts, Germany; Jessika Golle, University of Tübingen, Germany; Richard Goellner, University of Tuebingen, Germany

What parents do for their children – links with their expectations and child's indicators

Anne-Mai Meesak, Tallinn University, Institute of Educational Sciences, Estonia; Dmitri Rozgonjuk, University of Tartu, Institute of Computer Science, Estonia; Tiia Öun, Tallinn University, Institute of Educational Sciences, Estonia; Eve Kikas, Tallinn University, Estonia

Role of teachers' and parents' evaluations in the development of motivation and achievement

Satu Koivuhovi, University of Turku, Finland; Mari-Paullina Vainikainen, Tampere University, Finland

Session G: 13

Time: 17:00-18:30

Location: UOM_A06

SINGLE PAPER: MATHEMATICAL AND TEST ANXIETY**Chair**

Liv Håberg, Volda University College, Norway

The impact of mathematics anxiety on arithmetic performance: a dual-task study.

Serena Rossi, Loughborough University, United Kingdom; Krzysztof Cipora, Loughborough University, United Kingdom; Sara Caviola, University of Padova, Italy; Irene C. Mammarella, University of Padova, Italy; Iro Xenidou-Dervou, Loughborough University, United Kingdom

Reducing mathematical test anxiety: why different interventions lead to similar outcomes

Yulia Kovas, Goldsmiths University of London, United Kingdom; Evgeniia Alenina, National Research University Higher School of Economics, Russian Federation; Maxim Likhanov, National Research University Higher School of Economics, Russian Federation; Elina Tsigeman, National Research University Higher School of Economics, Russian Federation

Positive teachers' perceptions foster children's math performance against math anxiety

Enrica Donolato, University of Oslo, Norway; Sara Caviola, University of Padova, Italy; David Giofrè, School of Psychology, University of Leeds, United Kingdom; Irene C. Mammarella, University of Padova, Italy

Test anxiety fluctuations during secondary school assessments: the role of basic psychological needs

Stefanie De Jonge, Ghent University, Belgium; Evelien Opdecam, Ghent University, Belgium; Leen Haerens, Ghent University, Belgium

Session G: 14

Time: 17:00-18:30

Location: AUTH_T002

SINGLE PAPER: MINORITY STUDENTS AND CULTURAL DIVERSITY IN SCHOOLS**Chair**

BOBBY HOFFMAN, University of Central Florida, United States

Non-religious pupils in RE: Exploring differences in cognitive activation and relevance beliefs

Alexander Unser, TU Dortmund University, Germany

Using VaKE in higher education in Georgia: Experiences and challenges

Ekaterine Shaverdashvili, Ilia State University, Georgia; Tamar Mosiashvili, Ilia University, Tbilisi, Georgia

Implicit and Explicit Attitudes of Pre-service Teachers: The Case of Ethnicity and Sexuality

Andreas Gegenfurtner, University of Augsburg, Germany; Aldin Alijagic, University of Augsburg, Germany; Sylvia Gabel, Universität Augsburg, Germany; Özün Keskin, University of Augsburg, Germany; Jule Neubauer, University of Augsburg, Germany; Markus Dresel, University of Augsburg, Germany

Finnish ethnic minority youth constructing civic identity

Anuleena Kimanen, University of Turku, Finland; Samaneh Khalili, University of Turku, Finland; Aleksí Seger, University of Turku, Finland; Jenni Alisaari, University of Turku, Finland; Elina Kilpi-Jakonen, University of Turku, Finland

Session G: 15

Time: 17:00-18:30

Location: AUTH_T102

SINGLE PAPER: MOTIVATION AND SELF-REGULATED LEARNING**Chair**

Salome Flegr, Ludwig-Maximilians-Universität (LMU), Germany

Promoting self-regulated learning in children's daily lives: The effects of a mobile intervention

Jasmin Breitwieser, DIPF | Leibniz Institute for Research and Information in Education, Germany; Lea Nobbe, DIPF | Leibniz Institute for Research and Information in Education, Germany; Daniel Biedermann, DIPF | Leibniz Institute for Research and Information in Education, Germany; Garvin Brod, DIPF | Leibniz Institute for Research and Information in Education, Germany

Designing Self-Regulation interventions for different target groups in Entrepreneurship Education

Tobias Jenert, Paderborn University, Germany; Ronja Büker, Paderborn University, Germany

Motivational Regulation, Academic Effort, and Academic Success Among International Students

Hüseyin Hilmi Yıldırım, FernUniversität in Hagen, Germany; Julia Zimmermann, FernUniversität in Hagen, Germany; Kathrin Jonkmann, FernUniversität in Hagen, Germany

Session G: 16

Time: 17:00-18:30

Location: UOM_A07

SINGLE PAPER: EDUCATIONAL NEUROSCIENCE**Chair**

Eva Lindgren, Umeå University, Sweden

Rhythm perception fosters motor skills through music training: a neurobehavioral study with children

Marta Martins, University Institute of Lisbon (ISCTE-IUL), Portugal; Daniela Coimbra, Polytechnic Institute of Porto, Portugal; Ana Mafalda Reis, Unilabs - Boavista, Portugal; Christian Gaser, Friedrich Schiller University of Jena, Germany; São Luís Castro, Faculty of Psychology and Educational Sciences, University of Porto, Porto, Portugal, Portugal

The Effect of Problem Format on Children's Arithmetic Performance

Iro Xenidou-Dervou, Loughborough University, United Kingdom; Emine Simsek, Loughborough University, United Kingdom; Ilona Friso - van den Bos, University of Twente, Netherlands; Menno Van der Schoot, Vrije Universiteit Amsterdam, Netherlands; Sara Rashid, Cambridge University, United Kingdom; Ruth Trundle, Devon Education Services, United Kingdom; Ernest Van Lieshout, Vrije Universiteit Amsterdam, Netherlands

Effects of emotionality on news credibility: Insights from self-reports and brain imaging

Mareike Bacha-Trams, Research Methods in Psychology – Media-based Knowledge Construction, Faculty of Engineering, University of Duisburg-Essen, Duisburg, Germany, Germany; Daniel Bodemer, Research Methods in Psychology – Media-based Knowledge Construction, Faculty of Engineering, University of Duisburg-Essen, Duisburg, Germany, Germany

Session G: 17

Time: 17:00-18:30

Location: AUTH_TE2

SINGLE PAPER: TECHNOLOGY-ENHANCED TEACHING**Chair**

Matthias Huber, University College for Teacher Education Carinthia, Austria

Realizing adaptive teaching with educational technology? A benefit for low achieving school students

Leonie Sibley, University of Tübingen, Germany; Andreas Lachner, University of Tübingen, Germany; Christine Plicht, University of Tübingen, Germany; Armin Fabian, University of Tuebingen, Germany; Christian Wetke, University of Tübingen, Germany; Thorsten Bohl, University of Tübingen, Germany

Epistemic changes when university teachers use digital technology in assessing student learning

Linda Barman, KTH, Royal Institute of Technology, Sweden; Maria Weurlander, Stockholm University, Sweden

The educational potential of programming and the role of teachers. A scoping of systematic reviews

Synnøve H. Amdam, Volda University College, Norway; Sanna Forsström, University of Stavanger, Norway

Becoming a teacher to digitally transform education? Developing and applying the D(FIT)-Choice

Judith Martínez Moreno, University of Education Zurich / University of Zurich, Switzerland; Dominik Petko, University of Zurich, Switzerland

Session G: 18

Time: 17:00-18:30

Location: AUTH_T202

SINGLE PAPER: INFORMAL LEARNING**Chair**

Fabian Wolff, Universität of Koblenz, Germany

Informal science learning: an overview of activity types and their design characteristics

Tessa Eysink, University of Twente, Netherlands; Natasha Dmoshinskaia, University of Twente, Netherlands; Hannie Gijlers, University of Twente, Netherlands

School social media and the datafication of children

Karley Beckman, University of Wollongong, Australia; Tiffani Apps, University of Wollongong, Australia; Sue Bennett, University of Wollongong, Australia

Social dimensions of learning: unpacking the collaborative process in an online initiative

Karin Ekman, University of Gothenburg, Sweden; Thomas Hillman, University of Gothenburg, Sweden

Children's Leisure Writing Activities and Related Beliefs

Lisa Birnbaum, Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany; Stephan Kroener, Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Germany

Who cares? Gender role representation of same-sex parents in children's picture books

Lars Burghardt, University of Bamberg, Germany

Session G: 19

Time: 17:00-18:30

Location: UOM_R05

SINGLE PAPER: TEACHER-STUDENT RELATIONSHIPS, STUDENT ADJUSTMENT AND ACADEMIC OUTCOMES**Chair**

Kati Sormunen, University of Helsinki, Finland

The role of student-teacher relationships for classroom adjustment and later academic achievement

Ragnhild Lenes, University of Stavanger, Norway; Dieuwert ten Braak, University of Stavanger, Norway; Ingunn Størksen, University of Stavanger, Norway

The relationship between teacher-child interaction and EF: A cross-cultural meta-analysis

Canmei Xu, KU LEUVEN, Belgium; Dieter Baeyens, KU Leuven, Belgium; Mariette Huijzinga, Vrije Universiteit Amsterdam, Netherlands; Wim Van Den Noortgate, KU LEUVEN, Belgium

Teacher-student relationships and psychosocial adjustment of students with learning disabilities

Fotini Polychroni, NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS, Greece; Alexander-Stamatios Antoniou, National & Kapodestrian University of Athens, Greece; Evgenia Kyriakidou, National and Kapodistrian University of Athens, Greece; Despoina Kontarlatou, National and Kapodistrian University of Athens, Greece

Session G: 20

Time: 17:00-18:30

Location: UOM_R08

SINGLE PAPER: UNDERSTANDING AND SUPPORTING STUDENTS WITH AUTISM SPECTRUM DISORDER**Chair**

Karsten Stegmann, University of Passau, Germany

The role of autistic traits in peer influence on social skills in special needs classrooms

Gina Nenniger, University of Fribourg, Switzerland; Christoph Müller, University of Fribourg, Switzerland

Improving Computational Thinking for Children with Autism in the Virtual Environment

Nuodi Zhang, Florida State University, United States; Alex Barrett, Florida State University, United States; Fengfeng Ke, Florida State University, United States; Zlatko Sokolij, Florida State University, United States; Jewoong Moon, The University of Alabama, United States

Inclusion of Children with Autism Spectrum Disorder in Portugal: A Social Network Analysis Approach

Paulo César Dias, Universidade Catolica Portuguesa, Portugal; Ana Oliveira, Universidade Católica Portuguesa, Faculty of Philosophy and Social Sciences, Centre for Philosophical and Humanistic Studies, Portugal; Irene Cadime, Psychology Research Center, University of Minho, Braga, Portugal; Christoforos Mamas, University of California, San Diego, United States

What do secondary school teachers need to optimally educate students with Autism Spectrum Disorder?

Maria Fernanda Esqueda Villegas, University of Groningen, Netherlands; Steffie van der Steen, University of Groningen, Netherlands; Alexander Minnaert, University of Groningen, Netherlands

Session G: 21

Time: 17:00-18:30

Location: UOM_R01

POSTER PRESENTATION: VIDEO-BASED LEARNING

Chair

Astrid Wichmann, Ruhr University Bochum, Germany

Fostering Pre-service Teachers' Assessment Skills: Establishing Adaptivity in a Video Simulation

Michael Nickl, Technical University of Munich (TUM), Germany

VIPP-School: Feasibility of a video-feedback intervention to improve teacher-child interaction

K.M. Starreveld, Vrije Universiteit Amsterdam, Netherlands; Mathilde Overbeek, Vrije Universiteit Amsterdam, Netherlands; Agnes Willemen, VU University Amsterdam, Netherlands; Marian Bakermans-Kranenburg, University Institute of Psychological, Social and Life Sciences, Portugal

Multimedia principles in instructional videos for classroom: A case study with pre-service teachers

Juliette Desiron, University of Zürich, Switzerland; Eliana Brianza, University of Zurich, Institute of Education, Switzerland

Effects of quizzes on (self-regulated) learning when studying instructional videos

Margot van Wermeskerken, Utrecht University, Netherlands; Floor van Rosse, Erasmus MC Rotterdam, Netherlands

Effects of collaborative reception of explanatory videos on knowledge and competencies

Laura Schultze, Universität Hildesheim, Germany; Raphael Koßmann, Universität Hildesheim, Germany; Nicoletta Bürger, University of Hildesheim, Germany; Melanie Fabel-Lamla, Universität Hildesheim, Germany; Christof Wecker, Universität Hildesheim, Germany

Session G: 22

Time: 17:00-18:30

Location: UOM_R02

POSTER PRESENTATION: FOSTERING ARGUMENTATIVE PROCESSES AND SKILLS

Chair

SOFIA AVGITIDOU, Aristotle University of Thessaloniki, Greece

Learning genre knowledge from comparing argumentative texts: zooming in on the comparison processes

Tine Mombaers, University of Antwerp, Belgium; Roos Van Gasse, University of Antwerp, Belgium; Sven De Maeyer, Antwerp University, Belgium

Personal Relevance and Refutation: Fostering High School Students' Argument-Evaluation Skills

Nina Udvardi-Lakos, University of Freiburg, Germany; Tino Endres, University of Freiburg, Germany; Laura Wevelsiep, University of Freiburg, Germany; Lisa Bender, University of Freiburg, Germany; Alexander Renkl, University of Freiburg, Germany

Opening the black box of students' argumentative writing processes

Fien De Smedt, Ghent University, Belgium; Nina Vandermeulen, Umeå University, Sweden; Yana Landrieu, Ghent University, Belgium; Bram De Wever, Ghent University, Belgium; Hilde Van Keer, Ghent University, Belgium

Reclaiming habit formation for democratic values in schools: practicing and experiencing citizenship

Gabriel Fortes, Universidad Alberto Hurtado, Chile; Andreas Reichelt Lind, OsloMet - Oslo Metropolitan University, Norway; Antonia Larrain, Universidad Alberto Hurtado, Chile

Dealing with conflicting sources in argumentative writing and its consequences

Hyeyoun Kim, Dongguk University-Seoul, Republic of Korea; Gyeonghoon Yoon, High School Attached to College of Education, Dongguk University, Republic of Korea

Stories of Crises in Art: A Potential for Democratic Education?

Britta Breser, University of Vienna & University of Graz, Austria

Dialogue and critical questions to promote critical thinking in Secondary Education students

Jose Luna, University of Barcelona, Spain; Núria Castells, Faculty of Psychology, University of Barcelona, Spain; Esther Pérez, Universitat de Barcelona, Spain; Marta Minguella, University of Barcelona, Spain; Amelia Tey, Universitat de Barcelona, Spain

Session G: 23

Time: 17:00-18:30

Location: UOM_R03

POSTER PRESENTATION: INCLUSIVE EDUCATION AND LEARNING

Chair

LEFKOTHEA KARTASIDOU, University of Macedonia, Greece

Domain-specificity and domain-generalty in teaching sensitive and controversial issues

Machteld Vandecandelaere, KU Leuven, Belgium; Rushda Kaleem, KU Leuven (BE), Belgium; Cato Teughels, KU Leuven (BE), Belgium; Nafen Zhuo, KU Leuven (BE), Belgium; Jan Sermeus, KU Leuven, Royal Observatory of Belgium, Belgium

Evaluation of a Pilot School-Based Teacher-Coaching intervention to change the social climate

Carina Wikman, Stockholm University, Department of Special Education, Sweden; Mara Westling Allodi, Stockholm University, Sweden; Laura Ferrer-Wreder, Stockholm University, Department of Psychology, Sweden

Reference norm orientations of teachers and characteristics of professional contexts

Josephine Tanneberger, University of Potsdam, Germany; Jessica Jaeuthe, Universität Potsdam, Germany; Sebastian Kempert, University of Potsdam, Germany; Nadine Spörer, University of Potsdam, Germany

Online studying with special needs - a student perspective

Maria Öhrstedt, Stockholm University, Sweden; Annika Käck, Stockholm University, Sweden; Helena Reierstam, Stockholm University, Sweden

Case study: Students' emotional well-being and social participation with focus on SEN during COVID19

Alexandra Pirker, University of Vienna, Austria; Katharina-Theresa Lindner, University of Vienna, Austria

Social Inclusion in Secondary School

Reto Luder, Zurich University of Teacher Education, Switzerland; Andre Kunz, Zurich University of Teacher Education, Switzerland; Giuliana Pastore, Zurich University of Teacher Education, Switzerland; Ariane Paccaud, Pädagogische Hochschule Zürich, Switzerland

Education Accessibility in Challenging Circumstances: A Case of Displaced Persons in Nigeria.

Vivienne Kachollom Rwang, University of Southampton, United Kingdom

Session G: 24

Time: 17:00-18:30

Location: UOM_GYM

ROUNDTABLE: RELIGION, SPIRITUALITY AND WORLDVIEWS

Chair

Fernanda Rocha de Freitas, Universidade Federal de Minas Gerais, Brazil

Learning to judge religious conflicts: A structural model of judgement competence for RE

Frederike Gabelt, TU Dortmund University, Germany

Historical narratives among students and their meaning-making function

G.M. Gaans, University of Amsterdam, Netherlands

What is religious literacy? A delphi study design on Finnish academic experts' perceptions.

Martin Ubani, University of Eastern Finland, Finland

Preparing upper-secondary school students for higher education with emphasis on academic literacy

Tonje Stenseth, University of South-Eastern Norway, Norway; Liv Lofthus, University of southeastern Norway, Norway

Session G: 25

Time: 17:00-18:30

Location: UOM_A04

WORKSHOP: EVALUATING QUALITY OF ASSESSMENT IN HIGHER EDUCATION WITH THE ONLINE ASSESSMENT WEB TOOL

Evaluating quality of assessment in higher education with the online Assessment Web tool

Tamara Schilt-Mol, Hogeschool van Arnhem en Nijmegen, Netherlands; Eline den Tuinder, HAN University of Applied Sciences, Netherlands; Marion van de Wijdeven, HAN University of Applied Sciences, Netherlands; Edwin Buijs, HAN University of Applied Sciences, Netherlands; Kyle Van den Langenberg, HAN University Nijmegen, Netherlands; Marjoleine Dobbelaer, HAN University Nijmegen, Netherlands; Linda Jakobs, HAN University of Applied Sciences (UAS), Netherlands; Sharon Klinkenberg, University of Amsterdam, Netherlands

Session G: 26

Time: 17:00-18:30

Location: UOM_A05

ICT DEMONSTRATION: AI-SUPPORTED ACQUISITION OF ARGUMENTATION SKILLS: THE 'ARGUENISER'

AI-supported acquisition of argumentation skills: the 'Argueniser'

Stephan Geschwind, University of Passau, Germany; Deborah Voss, University of Passau, Germany; Veronika Hackl, Universität Passau, Germany

Session H: 1

Time: 08:00-09:30

Location: HELEXPO_CC

INVITED SYMPOSIUM: FROM ACCESS TO IMPACT: A QUALITY PERSPECTIVE ON EARLY CHILDHOOD DIGITAL EDUCATION**Chair**

Franziska Cohen, University of Education Freiburg, Germany

Organiser

Franziska Cohen, University of Education Freiburg, Germany

Discussant

Yvonne Anders, Otto-Friedrich-University of Bamberg, Germany

How can guided pretend play contribute to the quality of digital education in early childhood?

Franziska Vogt, St.Gallen University of Teacher Education, Switzerland; Lena Hollenstein, University of Teacher Education St.Gallen, Switzerland

Learning words with social robots: Preschoolers' multimodal behavior during retrieval difficulties

Nils Frederik Tolksdorf, Paderborn University, Germany

Criteria for and development of high quality multilingual digital picture books

Trude Hoel, University of Stavanger, Norway; Katarzyna Tunkiel, University of Stavanger, Norway

Creativity apps for young children: analysis of app store data, characteristics, and quality

Pinar Kolancali, University of Oxford, United Kingdom; Victoria Murphy, University of Oxford, United Kingdom; Sophie Booton, University of Oxford, United Kingdom

ANNOTATIONS:
SIG 5 INVITED SYMPOSIUM

Session H: 2

Time: 08:00-09:30

Location: UOM_CH

INVITED SYMPOSIUM: PRACTICE-BASED RESEARCH EXPLORING THE COMPLEXITY BETWEEN TEACHING, WELLBEING AND INNOVATION**Chair**

Essi Ryymin, Häme University of Applied Sciences, Finland

Discussant

Emmy Vrieling, Open University of the Netherlands, Netherlands

Promoting wellbeing of higher education teachers

Liisa Postareff, HAMK University of Applied Sciences, Finland; Anna Parpala, University of Helsinki, Finland; Petri Nokelainen, Tampere University, Finland

Guiding thesis circles in higher education: creating value for teachers and learners

Kamakshi Rajagopal, AE - Adapt & Enable, Belgium; Ya Ping Hsiao, Tilburg University, Netherlands; Steven Verjans, Open University of the Netherlands, Netherlands; Emmy Vrieling, Open University of the Netherlands, Netherlands; Inge Damen, Open University of the Netherlands, Netherlands

Does watching oneself / someone in an immersive video affect emotions and sense of presence?

Vito Candido, SFUVET, Switzerland; Francesca Amenduni, Swiss Federal University for Vocational Education and Training (SFUVET), Switzerland; Alberto Cattaneo, Swiss Federal University for Vocational Education and Training, Switzerland

Social capital related to teachers' innovative behaviour: a scientific and practice-based approach

Stefan Robbers, Open University Netherlands, Netherlands; Emmy Vrieling, Open University of the Netherlands, Netherlands; Marjan Vermeulen, Heerlen Open Universiteit, Netherlands; Arnoud Evers, Open Universiteit, Netherlands

ANNOTATIONS:
INVITED SYMPOSIUM OF THE EUROPEAN ASSOCIATION FOR PRACTITIONER RESEARCH ON IMPROVING LEARNING (EAPRIL)

Session H: 3

Time: 08:00-09:30

Location: AUTH_T002

SYMPOSIUM: MATHEMATICAL STRATEGY USE: CAN WE EXPECT EVERYONE TO BE FLEXIBLE IN ALL CIRCUMSTANCES?**Chair**

Erika Schlatter, Leiden University, Netherlands

Organisers

Marian Hickendorff, Leiden University, Netherlands; Jake McMullen, University of Turku, Finland; Erika Schlatter, Leiden University, Netherlands

Discussant

Hedwig Gasteiger, Osnabrück University, Germany

What strategy works for whom? Flexible and adaptive strategy use in primary school mathematics.

Erika Schlatter, Leiden University, Netherlands; Marian Hickendorff, Leiden University, Netherlands

Are strategy selection and execution in multidigit subtraction related to executive functions?

Stijn Van Der Auwera, KU Leuven, Centre for Instructional Psychology and -Technology, Belgium; Bert De Smedt, KU Leuven, Belgium; Joke Torbeyns, KU Leuven, Belgium; Lieven Verschaffel, KU Leuven, Belgium

Misconceptions of the order of operations and the use of conceptually-derived arithmetic strategies

Joanne Eaves, Nottingham University, United Kingdom; Camilla Gilmore, Loughborough University, United Kingdom; Nina Attridge, University of Portsmouth, United Kingdom

Adaptive number knowledge is related to procedural flexibility in highschoolers

Irene Pampallis, University of the Witwatersrand, South Africa; Jake McMullen, University of Turku, Finland; Jon Star, Harvard Graduate School of Education, United States; Koen Veermans, University of Turku, Finland

Session H: 4

Time: 08:00-09:30

Location: AUTH_DC1

SYMPOSIUM: INVESTIGATING THE TECHNOLOGICAL PEDAGOGICAL AND CONTENT KNOWLEDGE MODEL FROM A BIRD'S EYE VIEW**Chair**

Andreas Lachner, University of Tübingen, Germany

Organisers

Armin Fabian, University of Tuebingen, Germany; Iris Backfisch, University of Tuebingen, Germany

Discussant

Charoula Angeli, University of Cyprus, Cyprus

Looking at the forest (not the trees): A systematic review of systematic reviews on TPACK

Eliana Brianza, University of Zurich, Institute of Education, Switzerland; Mirjam Schmid, University of Zurich, Switzerland; University of Queensland, Australia, Switzerland; Sog Yee Mok, University of Teacher Education of the Grisons, Switzerland; Dominik Petko, University of Zurich, Switzerland

A systematic review on measures of teachers' competence-related beliefs about ICT use

Charlott Rubach, University Rostock, Germany; Rebecca Lazarides, University of Potsdam, Germany

Meta-analysis to examine the validity of TPACK self-report assessments

Iris Backfisch, University of Tuebingen, Germany; Jürgen Schneider, German Institute for International Educational Research (DIPF), Germany; Andreas Lachner, University of Tübingen, Germany; Katharina Scheiter, University of Potsdam, Germany; Ronny Scherer, University of Oslo, Norway

A data-driven systematic review of TPACK-based professional development programs

Armin Fabian, University of Tuebingen, Germany; Iris Backfisch, University of Tuebingen, Germany; Kenneth Kirchner, University of Tuebingen, Germany; Andreas Lachner, University of Tübingen, Germany

Session H: 5

Time: 08:00-09:30

Location: AUTH_DC2

SYMPOSIUM: CHILDREN'S ARGUMENTATION**Chairs**

Chrysi Rapanta, Universidade Nova de Lisboa, Portugal; Jarmila Bubikova-Moan, Oslo Metropolitan University, Norway

Discussant

Antonia Larrain, Universidad Alberto Hurtado, Chile

Argumentation in the early years: a meta-synthesis of research

Jarmila Bubikova-Moan, Oslo Metropolitan University, Norway

Argumentation and dialogical shifts in young children's role play

Margareth Sandvik, Oslo Metropolitan University, Norway

Changing practices in dialogue and argumentation: Teachers' voice on effective aspects of PD

Maria Vrikki, University of Nicosia, Cyprus; Riikka Hofmann, University of Cambridge, United Kingdom; Elena Papanastasiou, University of Nicosia, Cyprus; Maria Evagorou, University of Nicosia, Cyprus; Fiona Maine, University of Exeter, United Kingdom

A cross-comparative analysis of children's arguments in 5 European countries

Chrysi Rapanta, Universidade Nova de Lisboa, Portugal; FABRIZIO MACAGNO, Universidade Nova de Lisboa, Portugal

Session H: 6

Time: 08:00-09:30

Location: UOM_R09

SYMPOSIUM: MEETING THE NEEDS OF GIFTED AND TALENTED STUDENTS**Chair**

Marielle Wittelings, Behavioural Science Institute, Radboud University Nijmegen, Netherlands

Organisers

Jessica Vergeer, Radboud University Nijmegen, Behavioural Science Institute, Netherlands; Marielle Wittelings, Behavioural Science Institute, Radboud University Nijmegen, Netherlands; Mare van Hooijdonk, Radboud University Nijmegen, Netherlands

Discussant

Karine Verschueren, KU Leuven, Belgium

CANCELLED: The effectiveness of the Achievement Motivation Enhancement (...)

Ophelie Desmet, Dewar College of Education, Valdosta State University, United States

Creativity in full-time and part-time gifted education

Mare van Hooijdonk, Radboud University Nijmegen, Netherlands; Loes Marsman, Radboud University Nijmegen, Netherlands

Inclusive Education for Gifted Students: A Systemic Approach

Jessica Vergeer, Radboud University Nijmegen, Behavioural Science Institute, Netherlands; Marjolijn van Weerdenburg, Radboud University Nijmegen, Behavioural Science Institute, Netherlands; Trudie Schils, Maastricht University, School of Business and Economics, Netherlands; Anouke Bakx, Fontys University, Radboud University, Netherlands

Identifying and Providing Supports for Gifted Students from Low-Income Households in Dublin, Ireland

Leeanne Hinch, Dublin City University, Ireland

Session H: 7

Time: 08:00-09:30

Location: AUTH_TE2

SYMPOSIUM: USING EXPERIENCE-SAMPLING METHODS TO UNDERSTAND PROCESSES OF LEARNING AND INSTRUCTION**Chair**

Hanna Dumont, University of Potsdam, Germany

Organiser

Hanna Dumont, University of Potsdam, Germany

Discussant

Garvin Brod, DIPF | Leibniz Institute for Research and Information in Education, Germany

Intraindividual dynamics between self-concept and perceived mathematics learning achievement

Christoph Niepel, University of Luxembourg, Luxembourg; Herb W. Marsh, Australian Catholic University, Australia; Jiesi Guo, Australian Catholic University, Australia; Reinhard Pekrun, Australian Catholic University, Australia; Jens Möller, Kiel University, Educational Science, Germany

Intraindividual dynamics and fluctuations of competence, engagement and disaffection

Jussi Järvinen, University of Helsinki, Finland; Lauri Hietajärvi, University of Helsinki, Finland; Elina E. Ketonen, University of Helsinki, Finland; Lars-Erik Malmberg, University of Oxford, United Kingdom; Katariina Salmela-Aro, Helsinki University, Finland

Intraindividual dynamics between social relatedness and learning engagement

Simon Ohl, University of Potsdam, Germany; Hanna Dumont, University of Potsdam, Germany

Relevance of perceived teaching quality for students' self-regulation in individual lessons

Friederike Blume, DIPF | Leibniz Institute for Research and Information in Education, Germany; Florian Schmiedek, DIPF | Leibniz Institute for Research and Information in Education, Germany

Session H: 8

Time: 08:00-09:30

Location: UOM_A02

SYMPOSIUM: METHODS FOR EXAMINING THE STRATEGIC AND TIMELY DEPLOYMENT OF SRL PROCESSES**Chair**

Allyson Hadwin, University of Victoria, Canada

Discussant

Anastasia Efklides, Aristotle University of Thessaloniki, Greece

Trigger events as a framework for empirically evidencing regulation in dynamic learning situation

Sanna Järvelä, University of Oulu, Finland; Allyson Hadwin, University of Victoria, Canada

Theorized Self-Regulated Learning Events and Sequences and Task Performance During Biology Learning

Matthew Bernacki, University of North Carolina at Chapel Hill, United States; Fatemeh Salehian Kia, Simon Fraser University, Canada; Jeff Greene, university of north carolina at chapel hill, United States; Linyu Yu, University of North Carolina at Chapel Hill, United States; Robert Plumley, University of North Carolina at Chapel Hill, United States; Shelbi Kuhlman, University of North Carolina at Chapel Hill, United States

Examining the adaptive nature of self-regulated learning in a large-scale university course

Mladen Raković, Monash University, Australia; Jeff Greene, university of north carolina at chapel hill, United States; Matthew Bernacki, University of North Carolina at Chapel Hill, United States; Robert Plumley, University of North Carolina at Chapel Hill, United States; Kelly Hogan, University of North Carolina at Chapel Hill, United States; Abigail Panter, University of North Carolina at Chapel Hill, United States

Facial expressions and regulation in students completing a collaborative, scenario-based online task

Matthew Moreno, McGill University, Canada; Mariel Miller, University of Victoria, Canada; Allyson Hadwin, University of Victoria, Canada; Susanne Lajoie, McGill University, Canada; Keerat Grewal, McGill University, Canada; Reinhard Pekrun, University of Essex, United Kingdom; Jason Harley, McGill University, Canada

Session H: 9

Time: 08:00-09:30

Location: UOM_A03

SINGLE PAPER: SOCIAL DEVELOPMENT IN CHILDREN AND ADOLESCENTS**Chair**

Josef Guggemos, University of Education Schwäbisch Gmünd, Germany

Linkages between temperament, social skills, and self-concept in childhood

Eleni Kallia, University of Thessaly, Greece; Evaggelia Tsiara, University of Thessaly, Greece; Irini Dermizaki, University of Thessaly, Greece

The role of body image to the psychological health and welfare of young students

Maria Zafiri, University of Thessaly, Greece; Angeliki Leondari, University of Thessaly, Greece; Grigoris Kiosseoglou, Aristotle University of Thessaloniki, Greece

Assessing core socioemotional skills in adolescent students: A pilot study

Rui Maio, Faculty of Psychology and Educational Sciences of the University of Porto, Portugal; Ana Camacho, University of Porto, Portugal; Catarina Grande, University of Porto, Portugal; Teresa Leal, University of Porto, Portugal; Diana Alves, University of Porto, Portugal; Isabel M.P. Abreu-Lima, University of Porto, Portugal; Alan Oliveira, Columbia University, United States; Rachel Outhred, Oxford MeasurEd, United Kingdom; Joana Cadima, University of Porto, Portugal

Parenting styles and social behavior of children and adolescents: a latent profile analysis

Wassilis Kassis, School of Education, FHNW, Switzerland; AIKATERINI VASIOU, University of Crete, Greece; Anastasia Krasanaki, Hellenic Open University, Greece; Spyridon Tandaros, National Kapodistrian University of Athens, Greece

Session H: 10

Time: 08:00-09:30

Location: AUTH_DC3

SINGLE PAPER: SKILLS AND PRACTICES OF UNIVERSITY TEACHERS**Chair**

Özün Keskin, University of Augsburg, Germany

Generic skills in higher education - teaching conceptions, practices and pedagogical training

Tarja Tuononen, University of Helsinki, Finland; Heidi Hyytinen, University of Helsinki, Finland; Katri Kleemola, University of Helsinki, Finland; Telle Hailikari, Häme University of Applied Sciences, Finland; Auli Toom, University of Helsinki, Finland

Mentoring for student reflection and employability competences: A quasi-experimental study

Wendy Nuis, Maastricht University, Netherlands; Katharina Zimmerling, Maastricht University, Netherlands; Mien Segers, Maastricht University, Netherlands; Simon Beausaert, Maastricht University, Netherlands

Supervision of degree projects: doing collectivity in practice

Jenny Magnusson, Södertörn University, Sweden

Session H: 11

Time: 08:00-09:30

Location: UOM_CR

SINGLE PAPER: RELIGIOSITY AND SPIRITUALITY**Chair**

Dagmar Festner, University of Paderborn, Germany

Children's and young people's value learning, worldviews and resilience in uncertain times

Arniika Kuusisto, University of Helsinki, Finland

Finnish ethnic minority youth and inspiration from religion for civic engagement

Anuleena Kimanen, University of Turku, Finland; Samaneh Khalili, University of Turku, Finland; Aleksi Seger, University of Turku, Finland; Jenni Alisaari, University of Turku, Finland; Elina Kilpi-Jakonen, University of Turku, Finland

Turkish-Muslim and Reformed Orthodox Parents: Religious Identity Disclosure in Dutch Primary Schools

Rosanne Aantjes, Canterbury Christ Church University, United Kingdom

Session H: 12

Time: 08:00-09:30

Location: UOM_R05

SINGLE PAPER: TEACHERS' TECHNOLOGICAL-PEDAGOGICAL KNOWLEDGE AND USE OF EDUCATIONAL TECHNOLOGIES**Chair**

Aki Schumacher, Hector Research Institute of Education Sciences and Psychology, University of Tübingen, Germany

How teachers use digital data: A systematic review

Alina Hase, Leuphana University Lueneburg, Germany; Franziska Greiner, Universität Leipzig, Germany; Poldi Kuhl, Leuphana Universität Lüneburg, Germany

Teachers' Technological-Pedagogical Knowledge, computer use in class, and students' ICT

Karsten Stegmann, University of Passau, Germany; Tamara Kastorff, Technical University of Munich, Germany; Frank Fischer, Ludwig-Maximilians-Universität (LMU), Germany

Relation between Teachers' Pedagogical Knowledge, Classroom Activities and Self-Regulated Learning

Karsten Stegmann, University of Passau, Germany; Sabrina Reith, Technical University of Munich, Germany; Tamara Kastorff, Ludwig-Maximilians-Universität (LMU), Germany; Stefan Ufer, Ludwig-Maximilians-Universität (LMU), Germany; Birgit J. Neuhaus, LMU Munich, Germany; Maria Bannert, Technical University of Munich (TUM), Germany

Structural Conditions of Professional Learning Communities on Educational Technologies

Sonja Berger, Ludwig-Maximilians-Universität in Munich, Germany; Andrea Ludwig, ISB - State Institute for School Quality and Educational Research Munich, Germany; Pauline Woop, Ludwig-Maximilians-Universität in Munich, Germany; Vera Haldenwang, ISB - State Institute for School Quality and Educational Research Munich, Germany; Markus Teubner, ISB - State Institute for School Quality and Educational Research Munich, Germany; Karsten Stegmann, Ludwig-Maximilians-Universität in Munich, Germany

Session H: 13

Time: 08:00-09:30

Location: AUTH_T202

SINGLE PAPER: CURRICULUM DEVELOPMENT: STUDENTS, TEACHERS, PRINCIPALS**Chair**

Caroline Cohrssen, University of New England, Australia

Effective career orientation and career counselling in secondary education: a review study

Hanke Korpershoek, University of Groningen, Netherlands; Merlijn Karssen, Kohnstamm Institute, Netherlands; Alma Spijkerboer, University of Groningen, Netherlands; Regina Petit, Kohnstamm Institute, University of Amsterdam, Netherlands; Annet Hermans, independent, Netherlands

Towards a curriculum targeting teachers' relationship-building competence: Results of a Delphi study

Liedewij Borremans, KU Leuven, Belgium; Jantine Spilt, KU Leuven, Belgium

Mapping the main streams and foci of competence-based education research

Joonas Mannonen, Finnish Institute for Educational Research, University of Jyväskylä, Finland; Felipe Urrutia Vargas, Universidad de Chile, Chile; Raija Hämäläinen, University of Jyväskylä, Finland; Roberto Araya, Universidad de Chile, Chile; Sami Lehesvuori, University of Jyväskylä, Finland

Shifting technology leadership practices in a curriculum reform in Switzerland

Thomas Wicki, PHBern, University of Teacher Education, Switzerland

Session H: 14

Time: 08:00-09:30

Location: UOM_A13

SINGLE PAPER: EDUCATIONAL TECHNOLOGIES FOR CHILDREN**Chair**

Xavier Fontich, Autonomous University of Barcelona, Spain

Digital competence in Swedish preschools

Anna-Lena Godhe, Jönköping University, Sweden

A PlanningApp to help Children Make and Internalize Plans: A Case for Personalized Technology

Jasmin Breitwieser, DIPF | Leibniz Institute for Research and Information in Education, Germany; Daniel Biedermann, German Institute for International Educational Research (DIPF), Germany; Lea Nobbe, German Institute for International Educational Research (DIPF), Germany; Hendrik Drachler, Goethe-Universität Frankfurt, Germany; Garvin Brod, German Institute for International Educational Research (DIPF), Germany

Creating a communication bridge for refugee children's education with the eMascot

Charikleia Sparou, Radboud University, Netherlands; Caroline Pelletier, University College London, United Kingdom; Inge Molenaar, Radboud University, Netherlands; Manolis Mavrikis, UCL Knowledge Lab, United Kingdom

Integrative processes in primary school children during AR-supported lab work: An eye-tracking study

Kristin Altmeyer, Saarland University, Germany; Michael Barz, German Research Center for Artificial Intelligence (DFKI), Germany; Sarah Malone, Saarland University, Germany; Luisa Lauer, Saarland University, Germany; Jochen Kuhn, Ludwig-Maximilians-Universität (LMU), Germany; Markus Peschel, Saarland University, Germany; Daniel Sonntag, University of Oldenburg, Germany; Roland Bruenken, Saarland University, Germany

Session H: 15

Time: 08:00-09:30

Location: UOM_A05

SINGLE PAPER: SELF-REGULATED LEARNING IN ONLINE SETTINGS**Chair**

Ester Miquel, Universitat Autònoma de Barcelona, Spain

Students' Self-Regulated Activities While Working on an Online Task-based Instruction in Physics

Claudia von Aufschnaiter, Institute of Physics Education, Germany; Alexander Eitel, University of Giessen, Germany; Jonas Gabi, Justus Liebig University Giessen, Germany; Anna Kienitz, Justus-Liebig-Universität Giessen, Germany; Joachim Stiensmeier-Pelster, Justus Liebig University Giessen, Germany; Andreas Vorholzer, Technical University of Munich, Germany; Julius Weckler, Justus Liebig University Giessen, Germany

Learning from data: using learning analytics to support self-regulated learning

Silvia Lipp, University of Graz, Austria; Susanne Kamsker, University of Graz, Austria

Student self-regulated learning in online assessments

Tiffani Apps, University of Wollongong, Australia; Karley Beckman, University of Wollongong, Australia; Sue Bennett, University of Wollongong, Australia; Lori Lockyer, Queensland University of Technology, Australia

Who keeps up? Predicting persistence in non-formal online courses using machine learning

Maria Klose, Leibniz Institute for Educational Trajectories (LIfBi), Germany; Philipp Handschuh, Leibniz Institute for Educational Trajectories (LIfBi), Germany; Diana Steger, University of Kassel, Germany

Session H: 16

Time: 08:00-09:30

Location: UOM_A11

SINGLE PAPER: CURRICULUM DEVELOPMENT IN EARLY CHILDHOOD EDUCATION**Chair**

Wolfram Rollett, University of Education Freiburg, Germany

Strategies to Promote Character Strengths Education in ECE Setting: A Scoping Review

Cheuk Ming Ho, The Education University of Hong Kong, Hong Kong

Teachers' personal interests: Do they have a place in early childhood curriculum?

Maria Birbili, Aristotle University of Thessaloniki, Greece

Aspects of learning in kindergarten: Listening to children's voices through photo-voice

Maria Kanaki, Aristotle University of Thessaloniki, Greece; Maria Papandreou, Aristotle University of Thessaloniki, Greece

The inclusion and importance of workshops in Early Childhood Education

Alexandros Mokias, 2nd Public School of Atalanti Fthiotidas, Greece; Spyridon Filippou-Filippis, University of Thessaly, Department of Early Childhood Education, Greece; Anastasios Siatras, University of Thessaly, Greece

Session H: 17

Time: 08:00-09:30

Location: AUTH_T102

SINGLE PAPER: TEACHER EDUCATION PROGRAMMES**Chair**

Lida Zoi David, University of Twente, Netherlands

Exploring the coherence of teacher education programmes via a mixed methods approach

Katharina Hellmann, University of Education Freiburg, Germany; Michelle Laux, PH Freiburg, Germany; Vasileios Symeonidis, University of Education Freiburg, Germany; Mirjamajja Mikkila-Erdmann, University of Turku, Finland; Norbert Erdmann, University of Turku, Finland; Julia Nummi, University of Turku, Finland

Bachelor's and master's thesis in teacher education

Marte Lorentzen, Oslo Metropolitan University, Norway; Hilde Afdal, OsloMet, Norway; Hanna Holmeide, Oslo Metropolitan University, Norway

Readiness to Teach Social and Emotional Learning: The Importance of Teacher Education Programs

Shea Ferguson, University of South Carolina, United States; Robbie Ross, University of South Carolina, United States; Kate Ascetta, University of South Carolina, United States; Molly Dawes, University of South Carolina, United States

Session H: 18

Time: 08:00-09:30

Location: UOM_R03

POSTER PRESENTATION: COGNITIVE SKILLS AND PROCESSES IN EARLY CHILDHOOD AND PRIMARY EDUCATION**Chair**

Ellen Kok, Utrecht University, Netherlands

The mediating role of children's neurocognition in the relation between physical and academic skills

Anne de Bruijn, Vrije Universiteit Amsterdam, Netherlands; Anna Meijer, Institute of Education and Child Studies, Leiden University, Netherlands; Marsh Königs, Emma Neuroscience Group, Emma Children's Hospital, Amsterdam UMC, University of Amsterdam, Netherlands; Jaap Oosterlaan, Vrije Universiteit Amsterdam, Netherlands; Joanne Smith, Center for Human Movement Sciences, University Medical Center Groningen, University of Groningen, Netherlands; Esther Hartman, University Medical Center Groningen / University of Groningen, Netherlands

Effects of familiarity and complexity on inhibitory control in science learning: preliminary results

Élisabeth Bélanger, Université du Québec à Montréal (UQAM), Canada; Lorie-Mariène Brault Foisly, Université du Québec à Montréal (UQAM), Canada; Steve Masson, Université du Québec à Montréal (UQAM), Canada; Patrice Potvin, Université du Québec à Montréal, Canada; Emmanuel Ahr, Université du Québec à Montréal (UQAM), Canada; François Thibault, Université du Québec à Montréal (UQAM), Canada

Children's School Readiness: Roles of Executive Functioning and Cumulative Family Risks

Kevin Kien Hoa Chung, The Education University of Hong Kong, Hong Kong; Sing Yeung Alfred Lee, The Education University of Hong Kong, Hong Kong; Cuina Catrina Liu, The Education University of Hong Kong, Hong Kong; Kevin Chan, The Education University of Hong Kong, Hong Kong; Chun Bun Lam, The Education University of Hong Kong, Hong Kong

Let's play and talk! An intervention to support vocabulary and narrative development for 3 year olds

MARIA EVANGELOU TSITRIDOU, International Hellenic University, Greece; Gillian Lake, DCU, Ireland; Eleni Tympa, International Hellenic University, Greece

The Links between Executive Function, Decoding and Reading Comprehension: English-Arabic Differences

Ibtehaj Alrushoud, University of Cambridge, United Kingdom; Rui WANG, University of Cambridge, China; Michelle Ellefson, University of Cambridge, United Kingdom

Effect of Stereotype Threat on the Performance of Elementary School Children: A Meta-Analysis

Fanny MAGOUTIER, University Grenoble Alpes, France; Pascal Pansu, Université Grenoble Alpes, France; Boris Vallée, université Rouen Normandie, France

Session H: 19

Time: 08:00-09:30

Location: UOM_R01

POSTER PRESENTATION: SOCIAL INTERACTION AND LEARNING

Chair

Julian Fick, TU Braunschweig, Germany

Teachers' productive error management behavior as integral part of whole class interaction

Martin Majcák, Masaryk University, Czech Republic

A Theoretical Conceptualization of the Quality of Pedagogical Interactions. A 2*3*2 Systematic

Boris Eckstein, University of Teacher Education Zurich, Switzerland; Alexander Wettstein, PHBern / University of Bern, Switzerland

Instructors body postures and their influence on perceived teacher enthusiasm and students' interest

Sören Traulsen, Leibniz Universität Hannover, Germany; Lysann Zander, Leibniz Universität Hannover, Germany

Beyond the Classroom Walls: De-encapsulation in a Change Laboratory Intervention with Adolescents

Pauliina Rantavuori, Tampere University, Finland; Piia Ruutu, University of Helsinki, Finland; Yrjö Engeström, University of Helsinki, Finland; Maria Tapola-Haapala, University of Helsinki, Finland

Dialogues across time and space in a video-based collaborative learning environment

Charlotte Beal, University of South-Eastern Norway, Norway; Rolf Steier, OsloMet, Norway

Learning, thinking and co-creating as embodied dialogue – a dialogic-inclusional approach

Eva Vass, Western Sydney University, Australia

Are peer interaction during school recess and motor performance related in 6- to 8-year olds?

Dagmar Derikx, University Medical Center Groningen / University of Groningen, Netherlands; Marina Schoemaker, University Medical Center Groningen / University of Groningen, Netherlands; Suzanne Houwen, University of Groningen, Netherlands; Esther Hartman, University Medical Center Groningen / University of Groningen, Netherlands

Session H: 20

Time: 08:00-09:30

Location: UOM_R02

POSTER PRESENTATION: IN-SERVICE TEACHERS' PROFESSIONAL DEVELOPMENT

Chair

Johan Korhonen, Åbo Akademi University, Finland

Predicting Teacher Attrition at Disadvantaged Schools – Impact of a Mentoring Intervention

Marcus Kindlinger, University of Duisburg-Essen, Germany; Eva Anderson-Park, University of Duisburg-Essen, Germany; Hermann J. Abs, University of Duisburg-Essen, Germany

Teachers' Self-Regulated Learning behaviors as a predictor of self-regulated learning teaching

Tova Michalsky, Bar-Ilan University, Israel

School-based Professional Learning Communities in a centralized educational system

Christina Stavrou, Cyprus Pedagogical Institute, Cyprus; Efi Paparistodemou, Cyprus Pedagogical Institute, Cyprus; Pavlina Hadjithedoulou-Loizidou, Cyprus Pedagogical Institute, Cyprus

Measuring Content- and Technology-Related Knowledge of Teachers – Self-Reports vs. an Knowledge Test

Timo Kosiol, Ludwig-Maximilians-Universität (LMU), Germany; Stefan Ufer, Ludwig-Maximilians-Universität (LMU), Germany

Comparing Frameworks for Professional Standards and Competencies for Teacher Education Worldwide

Susanne Narciss, TU Dresden, Germany; Jörg Zumbach, University of Salzburg, Austria

Teachers' shift of attention in authentic teaching situation

Maikki Pouta, University of Turku, Finland; Erno Lehtinen, University of Turku, Finland; Tuire Palonen, University of Turku, Finland

Session H: 21

Time: 08:00-09:30

Location: UOM_R04

POSTER PRESENTATION: LEARNING AND INSTRUCTIONAL TECHNOLOGIES**Chair**

Bernadette Dilger, University of St.Gallen, Switzerland

Extending Design Thinking with Digital Technologies

Manolis Mavrikis, UCL Knowledge Lab, United Kingdom; Marcelo Milrad, Linnaeus University, Sweden; Chronis Knyigos, National and Kapodistrian University of Athens, Greece; Marianthi Grizioti, National and Kapodistrian University of Athens, Greece; Christothea Herodotou, Open University, United Kingdom; Lieva Van Langenhove, Ghent University, Belgium; Katrien Strubbe, Ghent University, Belgium; Sofia Papavlasopoulou, Norwegian University of Science and Technology (NTNU), Norway; Carina Girvan, Trinity College Dublin, Ireland; Filothei Chalvatza, SIMPLE, Greece

Socially Withdrawn Students' Engagement in Classroom Discussions Under Three Learning Modalities

Yue Sheng, The Ohio State University, United States; Monica Lu, The Ohio State University, United States; Ziyi Wen, The Ohio State University, United States; Eric Anderman, The Ohio State University, United States; Tzu-Jung Lin, The Ohio State University, United States; Michael Glassman, The Ohio State University, United States; Saetbyul Kim, The Ohio State University, United States

Tools to create adaptive learning technologies without programming

Vincent Alevin, Carnegie Mellon University, United States; Jonathan Sewall, Carnegie Mellon University, United States

Written- or video-feedback? A study of the students' feedback use, perceptions and performance

Ignacio Máñez, University of Valencia / Interdisciplinary Research Structure for Reading Research (ERI Lectura), Spain; Noemi Skrobiszewska, University of Valencia / Interdisciplinary Research Structure for Reading Research (ERI Lectura), Spain; Adela Descals, University of Valencia, Spain; María José Cantero, University of Valencia, Spain; Rafael García, University of Valencia, Spain; Raquel Cerdan, University of Valencia, Spain; Óscar Fernando García, University of Valencia, Spain

The authentic use of interleaving: How can students be supported to mix categories?

Erdem Onan, Maastricht University, Netherlands; Felicitas Biwer, Maastricht University, Netherlands; Roman Abel, Ruhr University Bochum, Germany; Wisnu Wiradhany, Binus University, Indonesia; Anique de Bruin, Maastricht University, Netherlands

Teacher Students Discourses of Programming Activities in Teacher Education

Jeanette Sjöberg, Halmstad university, Sweden; Emma Edstrand, Halmstad University, Sweden

Session H: 22

Time: 08:00-09:30

Location: UOM_GYM

ROUNDTABLE: VOCATIONAL EDUCATION AND APPRENTICESHIP TRAINING**Chair**

Taiga Brahm, University of Tübingen, Germany

Identification in Vocational Education and Training: effects of training quality and satisfaction

Eveline Wuttke, Goethe-Universität Frankfurt, Germany; Karin Heinrichs, Pädagogische Hochschule Oberösterreich, Austria; Kristina Kögler, University of Stuttgart, Germany

Adolescents' mind wandering during reading on paper and screen

Viktoria Foss, University of Stavanger, Norway

Session H: 23

Time: 08:00-09:30

Location: UOM_A04

WORKSHOP: VOICE WORKSHOP: SUPPORTING EARLY CHILDHOOD EDUCATION TEACHERS TO ENHANCE CHILDREN'S PARTICIPATION**VOICE workshop: Supporting Early Childhood Education Teachers to enhance children's participation**

SOFIA AVGITIDOU, Aristotle University of Thessaloniki, Greece; Vassiliki Alexiou, University of Western Macedonia, Greece; SONIA LYKOMITROU, University of Western Macedonia, Greece

Session H: 24

Time: 08:00-09:30

Location: UOM_A06

ICT DEMONSTRATION: APPWEL, MEASURING AND INCREASING THE SCHOOL WELL-BEING OF PUPILS**Appwel, measuring and increasing the school well-being of pupils**

Hanne Luts, PXL University of Applied Sciences and Arts/UHasselt, Belgium; Lies Hamal, PXL University College, Belgium

Session H: 25

Time: 08:00-09:30

Location: UOM_A10

ICT DEMONSTRATION: HUMAN-BASED SIMULATION IN A VIRTUAL SPACE: "WALK THE TALK" OF TRAINING EDUCATORS IN AN UNCERTAIN ERA**Human-based simulation in a virtual space: "walk the talk" of training educators in an uncertain era**

Orna Levin, Achva Academic College, Israel

ANNOTATIONS:

THIS SESSION WILL TAKE PLACE IN ROOM UOM_W INSTEAD OF UOM_A10.

Keynotes: 1

Time: 09:45-11:15

Location: AUTH_CH

KEYNOTE: WHY DENY? THE PSYCHOLOGY OF PUBLIC MISUNDERSTANDING OF SCIENCE**Chair**

Lucia Mason, University of Padova, Italy

Why Deny? The Psychology of Public Misunderstanding of Science

Gale Sinatra, University of Southern California, United States

Keynotes: 2

Time: 09:45-11:15

Location: HELEXPO_CC

KEYNOTE: INDIVIDUAL DIFFERENCES IN EARLY NUMERACY, EXECUTIVE FUNCTIONS, MOTOR SKILLS AND PHYSICAL ACTIVITY**Chair**

Jo Van Herwegen, UCL Institute of Education, United Kingdom

Individual Differences in Early Numeracy, Executive Functions, Motor Skills and Physical Activity

Pirjo Aunio, University of Helsinki, Finland

Keynotes: 3

Time: 09:45-11:15

Location: UOM_CH

KEYNOTE: JOURNAL WRITING AS MEDIUM FOR THINKING AND LEARNING**Chair**

Eleftheria Gonida, Aristotle University of Thessaloniki, Greece

Journal Writing as Medium for Thinking and Learning

Matthias Nückles, University of Freiburg, Germany

Session I: 1

Time: 12:00-13:30

Location: AUTH_CH

INVITED SYMPOSIUM: THE EFFECTS OF SOCIAL AND EMOTIONAL LEARNING ON CHILDREN'S COGNITIVE AND PSYCHOLOGICAL WELLBEING**Chairs**

Katriina Salmela-Aro, Helsinki University, Finland; Barbara Schneider, Michigan State University, United States

The effects of COVID on learning outcomes and equity: international outcomes

STEPHAN VINCENT-LANCRIN, OECD, France

Discussant

Felice Levine, American Educational Research Association, United States

Immigrant and non-immigrant youth's educational and socio-emotional competence

FROSSO MOTTI, National and Kapodistrian University of Athens, Greece

Connecting Emotion, Cultural Context and Learning: Insights from Learning Science and Neuroscience

Na'ilah Nasir, Spencer Foundation, United States

Tracking Adolescents' Social and Emotional Supports During Optimal Learning Moments

Barbara Schneider, Michigan State University, United States

ANNOTATIONS:

INVITED SYMPOSIUM OF THE AMERICAN EDUCATIONAL RESEARCH ASSOCIATION (AERA)

Session I: 2

Time: 12:00-13:30

Location: UOM_CH

INVITED SYMPOSIUM: THE SOCIAL DIMENSIONS OF PEER ASSESSMENT**Chair**

Tijs Rotsaert, Ghent University, Belgium

Organisers

Jose Carlos Ocampo, University of Deusto, Spain; Morgane Senden, Université catholique de Louvain (UCL), Belgium

Discussant

Javier Fernández, Universidad de Leon, Spain

Peer assessment as a multi-level multi-process interactive practice: The M2IPA framework

Maryam Alqassab, Universidad de Las Palmas de Gran Canaria, Spain; Jan-Willem Strijbos, University of Groningen, Netherlands; Stefan Ufer, Ludwig-Maximilians-Universität (LMU), Germany

Dealing with errors while providing and processing peer-feedback on texts: A mixed-methods approach

Jochem Aben, University of Nijmegen, Netherlands; Mayra Mascareño Lara, University of Groningen, Netherlands; Anneke Timmermans, University of Groningen, Netherlands; Filitsa Dingyloudi, University of Groningen, Netherlands; Jan-Willem Strijbos, University of Groningen, Netherlands

The impact of training and backward evaluation on students' feeling of trust during peer feedback

Morgane Senden, Université catholique de Louvain (UCL), Belgium; Liesje Coertjens, Université catholique de Louvain (UCL), Belgium

Gender and Peer Feedback Content's Effects on Academic Performance and Peer Feedback Perceptions

Jose Carlos Ocampo, University of Deusto, Spain; Ernesto Panadero, Universidad Deusto, Spain; Fernando Díez, Universidad de Deusto, Spain; Iván Sánchez-Iglesias, Universidad Complutense de Madrid, Spain

ANNOTATIONS:
SIG 1 INVITED SYMPOSIUM

Session I: 3

Time: 12:00-13:30

Location: UOM_A13

SYMPOSIUM: THE DEVELOPMENT OF CORE PRACTICES FROM A CROSS-NATIONAL PERSPECTIVE**Chairs**

Pamela Grossman, University of Pennsylvania, United States; Urban Fraefel, University of Applied Sciences and Arts Northwestern Switzerland (PH FHNW), Switzerland

Discussant

Tina Seidel, Technische Universität München, Germany

A motivational perspective on learning core practices: the case of a Dutch teacher education program

Hanna Westbroek, Vrije Universiteit, Amsterdam, Netherlands; Anna Kaal, University of Amsterdam, Netherlands; Sebastiaan Donszelmann, University of Amsterdam, Netherlands

Using Core Practices to Improve Connections between Theory and Practice in Teacher Education

Kirsti Klette, University of Oslo, Norway; Inga Staal Jensen, University of Oslo, Norway; Geril Brataas, University of Oslo, Faculty of Education, Norway

How Can the Acquisition of Core Practices be optimally fostered? A Research Agenda and First Results

Hadmut Hipp, Albert-Ludwigs-Universität Freiburg, Germany; Anna Holstein, Leuphana University Lueneburg, Germany; Matthias Nückles, University of Freiburg, Germany; Marc Kleinknecht, Leuphana University Lueneburg, Germany

Supporting teachers' learning through co-planning, rehearsing and co-enacting instruction

Kjersti Waage, Norwegian University of Science and Technology (NTNU), Norway; Janne Fauskanger, University of Stavanger, Norway; Reidar Mosvold, University of Stavanger, Norway

Session I: 4

Time: 12:00-13:30

Location: UOM_A08

SYMPOSIUM: OBSTACLES AND OPPORTUNITIES: NEW INSIGHTS INTO (STUDENT) TEACHERS' ATTITUDES ON INCLUSIVE EDUCATION**Chairs**

Charlotte Sophie Schell, German Institute for International Educational Research (DIPF); IDeA-Research Center, Germany; Hannah Kleen, DIPF | Leibniz Institute for Research and Information in Education, Germany

Organisers

Charlotte Sophie Schell, German Institute for International Educational Research (DIPF); IDeA-Research Center, Germany; Charlotte Dignath, TU Dortmund University, Germany; Hannah Kleen, DIPF | Leibniz Institute for Research and Information in Education, Germany

Discussant

Sabine Glock, Bergische Universität Wuppertal, Germany

Investigating Student teachers' attitudes towards children with special educational needs

Charlotte Sophie Schell, German Institute for International Educational Research (DIPF); IDeA-Research Center, Germany; Charlotte Dignath, TU Dortmund University, Germany; Hannah Kleen, German Institute for International Educational Research (DIPF); IDeA-Research Center, Germany; Mareike Kunter, German Institute for International Educational Research (DIPF); IDeA-Research Center, Germany

Development of the Teacher Attitude to inclusion Scale

Christopher Boyle, University of Adelaide, Australia; Joanna Anderson, University of New England, Australia

Teacher attitudes towards inclusion – the role of self-efficacy beliefs

Hannu Savolainen, University of Eastern Finland, Finland; Akie Yada, University of Jyväskylä, Finland; Susanne Schwab, University of Vienna, Austria

Enhancing values in the educational system: effects on teachers attitudes toward inclusive education

Anne-Laure PERRIN, University of Lille -PSITEC - EA 4072, France; Mickaël Jury, Clermont Auvergne University, France; Caroline Desombre, Université de Lille, France

ANNOTATIONS:
PLEASE NOTE THAT THIS SESSION ROOM HAS CHANGED FROM AUTH_TE1 TO UOM_A08.

Session I: 5

Time: 12:00-13:30

Location: UOM_A02

SYMPOSIUM: THE NEURAL, (NON-)COGNITIVE AND HOME PREDICTORS OF INDIVIDUAL DIFFERENCES IN CHILDHOOD LEARNING**Chair**

Jessica Vergeer, Radboud University Nijmegen, Behavioural Science Institute, Netherlands

Organiser

Bob Kapteijns, Behavioural Science Institute, Radboud University Nijmegen, Netherlands

Discussant

Daniel Ansari, University of Western Ontario, Canada

Home, school and cognitive predictors of individual differences in early math and reading skills

Bob Kapteijns, Behavioural Science Institute, Radboud University Nijmegen, Netherlands; Anne van Hoogmoed, Radboud University, Netherlands; Marco van de Ven, Radboud University, Netherlands; Evelyn Kroesbergen, Radboud University, Netherlands; Rogier Kievit, Radboud University, Netherlands

Familial influences on the neural correlates of Math and Reading

Aymee Alvarez Rivero, University of Western Ontario, Canada; Lien Peters, The University of Western Ontario, Canada; Daniel Ansari, University of Western Ontario, Canada

CANCELLED: Modelling neurodiversity with a generative approach

Danyal Akarca, University of Cambridge, UK, United Kingdom; Petra E. Vértes, Department of Psychiatry, University of Cambridge, United Kingdom; Edward T. Bullmore, Department of Psychiatry, University of Cambridge, United Kingdom; the CALM team, MRC Cognition and Brain Sciences Unit, University of Cambridge, United Kingdom; Duncan E. Astle, MRC Cognition and Brain Sciences Unit, University of Cambridge, United Kingdom

Non-cognitive characteristics in a sample of (presumable) twice-exceptional students

Marielle Wittelings, Behavioural Science Institute, Radboud University Nijmegen, Netherlands; Lianne Hoogeveen, Radboud University, Netherlands; Evelyn Kroesbergen, Radboud University, Netherlands

Session I: 6

Time: 12:00-13:30

Location: UOM_A04

SYMPOSIUM: SELF-ASSESSMENT: HOW STUDENTS DO IT, HOW ACCURACY DEVELOPS OVER TIME AND THE ROLE OF FEEDBACK**Chair**

Leire Pinedo, Universidad de Deusto, Spain

Organisers

Leire Pinedo, Universidad de Deusto, Spain; Laurie Delnoij, Maastricht University SBE, Ts 53, Netherlands

Discussant

Juusoo Henrik Nieminen, The University of Hong Kong, Finland

Self-assessment accuracy over time, the role of general feedback and performance in higher education

Laurie Delnoij, Maastricht University SBE, Ts 53, Netherlands; Christian Kerckhoffs, Maastricht University, School of Business and Economics, Netherlands; Therese Grohnert, Maastricht University, Netherlands; Simon Beusaert, Maastricht University, Netherlands

How to improve students' self-assessment accuracy? Rubrics versus elaborated feedback

Lucas Liebenow, Leibniz Institute for Science and Mathematics Education (IPN), Germany; Johanna Fleckenstein, Leibniz Institute for Science and Mathematics Education (IPN), Germany; Jennifer Meyer, IPN - Leibniz Institute for Science and Mathematics Education, Germany

How Learners Self-Assess Using Rubrics and Exemplars: Tracing Cognitive and Affective Processes

Nathan Rickey, Queen's University, Canada

How do students self-assess? Identifying self-assessment profiles in secondary and higher education

Leire Pinedo, Universidad de Deusto, Spain; Javier Fernández, Universidad de Leon, Spain; Ernesto Panadero, Universidad Deusto, Spain; Iván Sánchez-Iglesias, Universidad Complutense de Madrid, Spain; Daniel Garcia, Universidad Complutense de Madrid, Spain

Session I: 7

Time: 12:00-13:30

Location: AUTH_T002

SYMPOSIUM: MOTIVATION-PERFORMANCE CONNECTIONS IN WRITING FROM ELEMENTARY TO SECONDARY SCHOOL**Chairs**

Ana Camacho, University of Porto, Portugal; Rui Alexandre Alves, University of Porto, Portugal

Discussant

Michael Hebert, University of California, Irvine, United States

The relationship between self-regulation and writing proficiency

Gustaf Bernhard Uno Skar, Norwegian University of Science and Technology, Norway; Steve Graham, Arizona State University, United States; Alan Huebner, University of Notre Dame, United States; Arne Johannes Aasen, Norwegian University of Science and Technology, Norway, Norway

Development of writing motivation and its contribution to gender differences in writing performance

Freyja Birgisdóttir, University of Iceland, Iceland; Kristján Ketill Stefánsson, University of Iceland School of Education, Iceland

Does adding a mindset intervention to a writing program enhance writing motivation and performance?

Ana Camacho, University of Porto, Portugal; Mariana Silva, Faculdade de Psicologia e de Ciências da Educação da Universidade do Porto, Portugal; Joana Cadima, University of Porto, Portugal; Nadine Correia, ISCTE - Instituto Universitário de Lisboa, Portugal; Paula Cristina Ferreira, Instituto Politécnico de Leiria, Portugal; João R. Daniel, ISPA - Instituto Universitário / U.I.P.C.D.E., Portugal; Rui Alexandre Alves, University of Porto, Portugal

Relating implicit beliefs, achievement goals, self-efficacy, motives, and writing performance

Fien De Smedt, Ghent University, Belgium; Yana Landrieu, Ghent University, Belgium; Bram De Wever, Ghent University, Belgium; Hilde Van Keer, Ghent University, Belgium

Session I: 8

Time: 12:00-13:30

Location: UOM_A03

SYMPOSIUM: WHEN DOES FEEDBACK UNFOLD ITS BENEFITS? INSIGHTS FROM STUDIES TAKING MULTIPLE PERSPECTIVES.**Chair**

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

Discussant

Susanne Narciss, TU Dresden, Germany

The effect of timing and elaborateness of feedback to support and teach reading comprehension
Elise Swart, Leiden University, Netherlands

Hattie & Timperley's feedback levels applied for subject specific content – A math example

Robbert Smit, University of Teacher Education St.Gallen, Switzerland; Patricia Bachmann, University of Teacher Education St.Gallen, Switzerland

How to receive negative feedback well? The effects of internal feedback and self-compassion

Susanne Narciss, TU Dresden, Germany; Helena Laudel, Dresden Technical University, Germany

Automated Feedback Effects on Interest Development: Mediated by Feedback's Perceived Usefulness

Luca Bahr, Leibniz Institute for Science and Mathematics Education (IPN), Germany; Lars Höft, IPN - Leibniz Institute for Science and Mathematics Education, Germany; Thorben Jansen, Leibniz Institute for Science and Mathematics Education, Germany

Session I: 9

Time: 12:00-13:30

Location: UOM_CR

SYMPOSIUM: UNIVERSITY STUDENTS' MOTIVATION: RECENT DEVELOPMENTS IN EXPECTANCY-VALUE THEORY**Chairs**

Julia Dietrich, Friedrich-Schiller-University Jena, Germany; Alexander Naumann, Friedrich-Schiller-University Jena, Germany

Discussant

Burkhard Gniewosz, University of Salzburg, Austria

How can motivational psychology benefit from different approaches to network analysis?

Julia Dietrich, Friedrich-Schiller-University Jena, Germany; Miriam Jähne, Friedrich-Schiller-University Jena, Germany; Alexander Naumann, Friedrich-Schiller-University Jena, Germany; Julia Moeller, Universität Leipzig, Germany

Stability of Motivational Profiles, the Predictive Role of Perfectionism, and Links to Well-being

Henriikka Juntunen, University of Helsinki, Finland; Heta Tuominen, University of Eastern Finland, Finland; Riikka Hirvonen, University of Eastern Finland, Finland; Jaana Viljaranta, University of Eastern Finland, Finland; Auli Toom, University of Helsinki, Finland; Markku Niemivirta, University of Eastern Finland, Finland

Determinants of Motivational Constellations During University Students' Exam Preparation

Theresa Schnettler, Mannheim University, Germany; Brian M. Galla, University of Pittsburgh, United States; Anne Scheunemann, Ruhr-University Bochum, Germany; Lena Sofie Kegel, Educational Psychology, University of Münster, Germany; Stefan Fries, University of Bielefeld, Germany; Stefan Janke, University of Mannheim, Germany; Carola Grunschel, University of Münster, Germany

Generalizability of situated expectancy-value findings: Invitation to a ManyMoments data collection

Jessica Baars, Leipzig University, Germany; Lennart Nörenberg, Universität Leipzig, Germany; Julia Moeller, Universität Leipzig, Germany

Session I: 10

Time: 12:00-13:30

Location: AUTH_DC2

SINGLE PAPER: SUPPORTING STUDENT'S WRITING AND LITERACY**Chair**

Jannika Haase, Leibniz University Hannover, Germany

Effective language programs for students who need extra language support: A systematic meta-review

Jordi Casteleyn, Antwerp University, Belgium; Mathea Simons, University of Antwerp, Belgium; Tom Smits, Antwerp University, Belgium

Enhancing genre knowledge of argumentative texts through learning from comPA(I)Ring exemplars

Tine Mombaers, University of Antwerp, Belgium; Roos Van Gasse, University of Antwerp, Belgium; Sven De Maeyer, Antwerp University, Belgium

Development of student feedback literacy through peer feedback in an online cross-cultural setting

Qiyun Zhu, Guangdong University of Foreign Studies, China

Student and Classroom-Level Predictors of Keyboard-Based Writing in Early Primary

Anabela Malpique, Edith Cowan University, Australia; Debora Valcan, Murdoch University, Australia; Deborah Pino-Pasternak, University of Canberra, Australia; Susan Ledger, The University of Newcastle, Australia; Mustafa Asil, University of Otago, New Zealand; Timothy Teo, The Chinese University of Hong Kong, Hong Kong

Analyzing the Writing Processes in the Project Fair Debating and Written Argumentation in Grade Nine

Winnie-Karen Giera, Institute of German Studies, University of Potsdam, Germany; Lucas Deutzmann, University of Potsdam, Germany; Sarah Risse, Institute of German Studies, University of Potsdam, Germany

Session I: 11

Time: 12:00-13:30

Location: UOM_R09

SINGLE PAPER: INFORMAL LEARNING IN PROFESSIONAL SETTINGS**Chair**

Attila Rausch, ELTE Eötvös Loránd University, Budapest, Hungary

The duality of online labour platforms as restrictive-expansive sites of professional learning

Anoush Margaryan, Copenhagen Business School, Denmark

Learning in Design Work: Developing Patient Information Systems through Object Construction

Christopher Sadorge, University of Oslo, Faculty of Education, Norway; Monika Nerland, University of Oslo, Norway

Use and appropriation of digital technologies in an informal work context

Valérie Payen Jean Baptiste, University of Geneva, Switzerland

Uncertainty as a driver for informal learning in crowdwork practices

Karen Schwien, Helmut Schmidt University, Germany; Tim Thrun, Helmut-Schmidt-Universität Hamburg, Germany; Tobias Schlömer, Helmut-Schmidt-University/University of the Federal Armed Forces Hamburg, Germany

Session I: 12

Time: 12:00-13:30

Location: AUTH_T202

SINGLE PAPER: INQUIRY LEARNING IN SCIENCE EDUCATION**Chair**

Ayafumi Goto, Gifu Shotoku Gakuen University, Japan

How Do Preschool Teachers Foster Children's Understanding of Scientific Inquiry?

Ada Haen, University of Hamburg, Germany; Mirjam Steffensky, University of Hamburg, Germany; Ilonca Hardy, Goethe-Universität Frankfurt, Germany; Miriam Leuchter, RPTU Landau, Germany; Henrik Saalbach, University of Leipzig, Germany; Anika Bürgermeister, University of Leipzig, Germany; Katharina Junge, University of Hamburg, Germany; Laura Venitz, University of Koblenz-Landau, Germany

How Does Critiquing Peer Ideas Help Students Revise Their Science Explanations?

Katharina M. Bach, Ludwig-Maximilians-Universität (LMU), Germany; Sarah Bichler, Ludwig-Maximilians-Universität (LMU), Germany; Marcia Linn, University of California-Berkeley, United States

Inquiry learning in science education with combined real and virtual experiments

Salome Flegr, Ludwig-Maximilians-Universität (LMU), Germany; Jochen Kuhn, Ludwig-Maximilians-Universität (LMU), Germany; Katharina Scheiter, University of Potsdam, Germany

Strengthening Creative Problem Solving in Elementary Science Education.

Ard Lazonder, Radboud University, Netherlands; Robin Willemsen, Radboud University, Netherlands; Evelyn Kroesbergen, Radboud University, Netherlands; Isabelle de Vink, Radboud University, Netherlands

Session I: 13

Time: 12:00-13:30

Location: AUTH_TE2

SINGLE PAPER: TEACHER TRAINING FOR INCLUSIVE EDUCATION**Chair**

Iro Xenidou-Dervou, Loughborough University, United Kingdom

Does teacher training support implementing inclusive education? - A systematic meta-analysis

Elisabeth Graf, University of Vienna, Austria; Johanna Donath, University of Vienna, Austria; Timo Lücke, University of Graz, Austria; Thomas Götz, Developmental and Educational Psychology, Austria

Content and duration of inclusive training: systematic review and analysis of teachers' discourse

Kamilla Khamzina, Université de Lille, France; Arnaud STANCZAK, Université Blaise Pascal - Clermont-Ferrand II, France; Celenie Brasselet, Université de Lille, France; Federica Cilia, Université de Picardie Jules Verne, France; Nicolas Guirimand, Université de Rouen Normandie, France; Sandrine Rossi, Université de Caen, France; Camille Legrain, Université de Lille, France; Caroline Desombre, Université de Lille, France

Validation of a French scale to assess educators' attitudes toward inclusive education

Camille Legrain, Université de Lille, France; Célénie Brasselet, Université de Lille, France; Kamilla Khamzina, Université de Lille, France; Mickaël Jury, Clermont Auvergne University, France; Caroline Desombre, Université de Lille, France

Measurement of Multidimensional Classroom Composition Using The Concept of Hypervolumes

Merle-Sophie Thielmann, University of Mannheim, Germany; Karina Karst, University of Mannheim, Germany

Session I: 14

Time: 12:00-13:30

Location: AUTH_T102

SINGLE PAPER: SUSTAINABLE DEVELOPMENT AND CLIMATE CHANGE**Chair**

Natalie de Nóbrega dos Santos, ISPA-Instituto Universitário, Portugal

The (Un)political Perspective on Climate Change in Education—A Systematic Review

Martin Schwichow, University of Education Freiburg, Germany; Johanna Kranz, Center of Excellence for Climate Change Impacts, Research Institute of Forest Ecology and Forestry Rhineland-Palatinate, Germany; Petra Breitenmoser, Zurich University of Teacher Education & University of Zurich, Switzerland; Kai Niebert, Institute of Education, University of Zurich, Switzerland

Using Data to inform Classroom Practice for Climate Change Education

Paul Howard-Jones, University of Bristol, United Kingdom; Nicola Warren-Lee, University of Bristol, United Kingdom; Chris Aldred, Sidcot School, Winscombe, United Kingdom

Scientific literacy, agency and the future: students' images of sociotechnical change

Tapio Rasa, University of Helsinki, Finland; Jari Lavonen, University of Helsinki, Finland; Antti Laherto, University of Helsinki, Finland

Students' meaningmaking processes in a school project about sustainable development

Anniken Furberg, University of Oslo, Norway; Kenneth Silseth, University of Oslo, Norway; Marthe Wiseth Fundingsrud, Department of Teacher Education and School Research, University of Oslo, Norway

Session I: 15

Time: 12:00-13:30

Location: UOM_A11

SINGLE PAPER: SOCIAL ASPECTS OF LEARNING IN THE CLASSROOM**Chair**

Stephanie Pieschl, Technical University of Darmstadt, Germany

Engagement as an emergent, collective process: A review of the literature

Mayra Mascareño Lara, University of Groningen, Netherlands; Elisa Kupers, University of Groningen, Netherlands; Naomi de Ruiter, University of Groningen, Netherlands; Fenna Wolthuis, University of Groningen, Netherlands

Evidence for Reciprocal Effects in the Classroom: An Explorative Approach

Alexander Jonas Jung, Hector Research Institute of Education Sciences and Psychology, Germany; Cora Parrisius, University of Education Karlsruhe, Germany; Benjamin Nagengast, Eberhard Karls Universität Tübingen, Germany; Kou Murayama, Eberhard Karls Universität Tübingen, Germany

Dynamic social network perspective on interaction in collaborative learning in elementary classrooms

Tomáš Lintner, Masaryk University, Czech Republic; Tomáš Diviák, University of Manchester, United Kingdom; Zuzana Šalamounová, Masaryk University, Czech Republic; Klara Sedova, Masaryk University, Czech Republic; Martin Sedláček, Masaryk University, Czech Republic; Roman Švaříček, Masaryk University, Czech Republic

Assessing a peer mediation teaching intervention in primary school: Pupils' perceptions

Angeliki Lithoxoidou, University of Western Macedonia, Greece

Session I: 16

Time: 12:00-13:30

Location: UOM_A05

SINGLE PAPER: ENGLISH AS A FOREIGN LANGUAGE AND BILINGUAL EDUCATION**Chair**

Erika Maksniemi, University of Helsinki, Finland

Effect of Linguistic challenges on pre-service teachers' self-efficacy in English medium instruction

Charles Selorm Dzormeku, University of Turku, Finland; Koen Veermans, University of Turku, Finland; Jake McMullen, University of Turku, Finland

Teacher students' understanding of migrants' identities in fiction in the context of EFL

Jon Brodal, Western Norway University of Applied Sciences, Norway

Capturing Professional Bilingual Teachers' Conceptualisation(s) of their Professionalism

Luisa Scherzinger, University of Tübingen, Germany; Taiga Brahm, University of Tübingen, Germany

Effects of inhibitory control on language development in dual-language learning preschoolers

Robin Segerer, University of Basel, Switzerland; Leila Teresa Schächinger Tenés, Faculty of Psychology, University of Basel, Switzerland, Switzerland; Jessica Carolyn Weiner, University of Basel, Switzerland; Alexander Grob, University of Basel, Switzerland

Session I: 17

Time: 12:00-13:30

Location: AUTH_DC3

SINGLE PAPER: PRE-SERVICE TEACHERS' COMPETENCIES**Chair**

Laura Outhwaite, University College London, IOE, United Kingdom

Reflective Competence Development in Teacher Education – Becoming Professional through Podcasting

Annette Busse, University of Kassel, Institute of Educational Science, Germany; Dorit Bosse, University of Kassel, Institute of Educational Science, Germany

Principals' views on new teachers' competence – A Q study in Sweden

Adrian Lundberg, Malmö University, Sweden; Philippe Collberg, Halmstad University, Sweden; christina lindh, Faculty of Teacher Education, University of Kristianstad, Sweden

How do pre-service teachers perceive the teacher's role in guiding students' peer interactions?

Olli-Pekka Heinimäki, University of Turku, Finland; Anu Kajamies, University of Turku, Finland; Mikko Tiilikainen, University of Turku, Finland; Marja Vauras, University of Turku, Finland

Teacher education in conflict-affected societies: What future teachers in Iraq learn post-ISIS?

Vasileios Symeonidis, University of Education Freiburg, Germany; Heike Wendt, University of Graz, Austria; Amal Zedan, University of Mosul, Iraq; Felix Senger, TU Dortmund University, Germany; Saraa Salim, University of Mosul, Iraq; Fawzi Jebrael Ibrahim, University of Mosul, Iraq

Session I: 18

Time: 12:00-13:30

Location: AUTH_DC1

SINGLE PAPER: FAMILY BELIEFS, ATTITUDES AND RELATIONSHIPS: ASSOCIATIONS WITH CHILDREN SOCIAL SKILLS**Chair**

- Dangen, Newcastle University, United Kingdom

Childbearing motivation, postpartum depression, and child adjustment: A 5-year longitudinal study

Reut Nachoum, Bar Ilan University, Israel; Anat Moed, Bar Ilan University, Israel; Nir Madjar, Bar Ilan University, Israel; Yaniv Kanat-Maymon, Reichman University, Israel

Relations between maternal perfectionism, young children's forgiveness, and social skills

Bertha Hei Ching Kum, The Education University of Hong Kong, Hong Kong; Sum Kwing Cheung, The Education University of Hong Kong, Hong Kong; Rebecca Y. M. Cheung, University of Reading, United Kingdom

Profiles of sibling relationships and their association with social-emotional skills

Elena Wittmann, Leibniz Institute for Educational Trajectories (LIfBi), Germany; Ilka Wolter, Leibniz Institute for Educational Trajectories (LIfBi), Germany

Session I: 19

Time: 12:00-13:30

Location: UOM_R05

SINGLE PAPER: TEACHER EMOTIONS**Chair**

Izaak Dekker, Amsterdam University of Applied Sciences (AUAS), Netherlands

Teacher Education and Social and Emotional Learning: A Swedish Case Study of Intended Curriculum

Blanka Rósa, Stockholm University, Sweden

Genuine, Faked, and Hidden Teacher Emotions in the Classroom: Are they Transmitted to Students?

Irena Burić, University of Zadar, Croatia; Aleksandra Huic, Faculty of Humanities and Social Sciences, University of Zagreb, Croatia; Barbara Balaž, Catholic University of Croatia, Croatia

The passion transmission model: Examining the mediating role of emotions

Tanya Chichekian, Université de Sherbrooke, Canada; Robert Vallerand, Université du Québec à Montréal, Canada

Mentoring teachers' perspective of student teachers' emotional challenges

Henrik Lindqvist, Linköping University, Sweden; Maria Weurlander, Stockholm University, Sweden; Linda Barman, KTH, Royal Institute of Technology, Sweden; Annika Wernerson, Karolinska Institutet, Sweden; Robert Thornberg, Linköping University, Sweden

Session I: 20

Time: 12:00-13:30

Location: UOM_R02

POSTER PRESENTATION: LEARNING AND INSTRUCTION DURING COVID-19**Chair**

JUNYI YANG, University of Oslo, Norway

Patterns of Teachers' Occupational Well-Being During the COVID-19 Pandemic

Sanni Pöysä, University of Jyväskylä, Finland; Eija Pakarinen, University of Jyväskylä, Finland; Marja-Kristiina Lerkkänen, University of Jyväskylä, Finland

A comparison of students' well-being before, during and after the peak of the COVID-19 pandemic

Josina Schriek, University of Hildesheim, Germany; Bastian Carstensen, Leibniz Institute for Science and Mathematics Education (IPN), Germany; Renate Soellner, University of Hildesheim, Germany; Uta Dr. Klusmann, Leibniz Institute for Science and Mathematics Education (IPN), Germany

Children's descriptions and drawings of SARS-CoV-2

Vasilía Christidou, Aristotle University of Thessaloniki, Greece; Fotini Bonoti, University of Thessaly, Greece; Penelope Papadopoulou, University of Western Macedonia, Greece; Polixeni Doumpala, Aristotle University of Thessaloniki, Greece

A learning analytics approach to teachers' use of ICT during and after the COVID-19 health crisis

Catalina Lomos, LISER - Luxembourg Institute for Socio Economic Research, Luxembourg; Hans Luyten, University of Twente, Netherlands; Frauke Kesting, SCRIPT (Service de Coordination de la Recherche et de l'Innovation pédagogiques et technologiques), Luxembourg; Filipe Lima da Cunha, SCRIPT (Service de Coordination de la Recherche et de l'Innovation pédagogiques et technologiques), Luxembourg

Re-Personalizing and Re-Socializing the Cognitive Processes of Distance Learning

William Whitten II, Total Experience Design, LLC, United States; Sandra E. Whitten, Fordham University, United States

Teachers' Perception of miscommunication between educational policy and schools during COVID-19

Julia Hafenscher, University of Vienna, Austria; Flora Woltran, University of Vienna, Austria

Session I: 21

Time: 12:00-13:30

Location: UOM_R01

POSTER PRESENTATION: READING COMPREHENSION**Chair**

Radel James Gacumo, University of Stavanger, Norway

Writing your own story about a statistical graph is more interesting than reading one

Liva Martinussen, University of Oslo, Norway; Anine Riege, University of Oslo, Norway; Rolf Reber, University of Oslo, Switzerland

Reading Fluency: Influences of Word Recognition and Comprehension

Luciana Vellinho Corso, Universidade Federal do Rio Grande do Sul (UFRGS), Brazil; Amanda Oliveira Meggiato, Universidade Federal do Rio Grande do Sul, Brazil; Helena Corso, Universidade Federal do Rio Grande do Sul, Brazil; RAQUEL WEBER, Universidade Federal do Rio Grande do Sul, Brazil; Fabiana de Miranda Rocha Luna, Universidade Federal do Rio Grande do Sul, Brazil

Reading achievement in a national university admission assessment: impact of motivation dimensions

Gabriela Gabriela Gómez, Universidad de O'Higgins, Chile; Marlene Rivas, Pontificia Universidad Católica de Chile, Chile

Are speech sound difficulties a marker of difficulties in language and later reading skills?

Line Walquist Sørli, UiT The Arctic University of Norway, Norway; Trude Nergard Nilssen, UiT The Arctic university of Norway, Norway; Monica Melby-Lervåg, University of Oslo, Norway; Bjarte Furnes, University of Bergen, Norway; Ømur Caglar-Ryeng, UiT The Arctic University of Norway, Norway

Do we understand the same when reading on tablets as we do on paper? A multilevel meta-analysis

Lidia Altamura García, University of Valencia, Spain; Anastasia Karagiorgi, Julius-Maximilians-Universität, Würzburg, Germany; Cristina Vargas, University of Valencia, Spain; Ladislao Salmerón, University of Valencia, Spain

Session I: 22

Time: 12:00-13:30

Location: UOM_R03

POSTER PRESENTATION: LEARNING AND INSTRUCTIONAL TECHNOLOGIES

Chair

David Corradi, University of Antwerp, Belgium

Promoting Effective Scaffolding for Self-Regulated Learning Strategies

Tongguang Li, Monash University, Australia

On the perception of social robots by higher education students

Josef Guggemos, University of Education Schwäbisch Gmünd, Germany; Stefan Sonderegger, University of St. Gallen, Switzerland; Sabine Seufert, University of St.Gallen, Switzerland

Building Learning Theories with AI-Enhanced Conjectural Mapping

Junsong Huang, National Institute of Education, Singapore; Susan Gwee, National Institute of Education/Nanyang Technological University, Singapore, Singapore; Jing Wu, National Institute of Education, Singapore; Simone Ann D Souza, National Institute of Education, Singapore

SENSEitive Systems: Can physiological and eye-tracking data be indicators of learner emotions?

Sharanya Lal, University of Twente, Netherlands; Tessa Eysink, University of Twente, Netherlands; Hannie Gijlers, University of Twente, Netherlands; Bernard Veldkamp, University of Twente, Netherlands; Willem Verwey, University of Twente, Netherlands

Long-term relations between teachers' attitudes towards technology and its use in the classroom

Barbara Rončević Zubković, University of Rijeka, Faculty of Humanities and Social Sciences, Croatia; Rosanda Pahljina-Reinić, University of Rijeka, Faculty of Humanities and Social Sciences, Croatia; Martina Bažon, University of Rijeka, Faculty of Humanities and Social Sciences, Rijeka, Croatia; Svjetlana Kolić-Vehovec, University of Rijeka, Faculty of Humanities and Social Sciences, Croatia

Undergraduates' perceptions of an online training to integrate conflicting sources in writing

Ruth Villalon, University of Cantabria, Spain; Maria Luna, Universidad a Distancia de Madrid (UDIMA), Spain; Isabel Martínez-Álvarez, Madrid Open University, Spain; Mar Mateos, Universidad Autónoma de Madrid, Spain

Session I: 23

Time: 12:00-13:30

Location: UOM_GYM

ROUNDTABLE: MENTORING AND COACHING

Chair

Athanasios Verdis, National and Kapodistrian University of Athens, Greece

Internships and its influence on self-assessed competences of teacher students

Carina Caruso, University of Paderborn, Germany

An exploratory study: perspectives of mentors on longterm internships at school

Carina Caruso, University of Paderborn, Germany; Michael Goller, Educational Science Institute (University of Paderborn), Germany

Second career teachers to the rescue? New insights on the development of their teaching skills

Tamar Tas, Universiteit Utrecht / Hogeschool Utrecht, Netherlands; Saskia Brokamp, Utrecht University of Applied Sciences, Netherlands; Mieke Koeslag-Kreunen, Universiteit Utrecht / Hogeschool Utrecht, Netherlands

Enabling Emerging Teacher Resilience through Reflective Writing

Mikko Tiilikainen, University of Turku, Finland; Olli-Pekka Heinimäki, University of Turku, Finland; Janne Lepola, Univ. of Turku, Finland; Anu Kajamies, University of Turku, Finland

Session I: 24

Time: 12:00-13:30

Location: UOM_R08

WORKSHOP: FLORERAAR?! A BOARD-GAME TO ENHANCE (PRE-SERVICE) TEACHERS' RESILIENCE

FLORERAAR?! A board-game to enhance (pre-service) teachers' resilience

Marjon Fokkens-Bruinsma, University of Groningen, Netherlands; Irene Poort, University of Groningen, Netherlands; Saskia Tuenter, University of Groningen, Netherlands; Michelle Gemmink, University of Groningen / Katholieke Pabo Zwolle, Netherlands

Session I: 25

Time: 12:00-13:30

Location: UOM_A10

ICT DEMONSTRATION: DESIGNING TECHNOLOGY TO SUPPORT MULTIMODAL DIALOGUE AND PARTICIPATION: THE THIRD GENERATION TALKWALL

Designing technology to support multimodal dialogue and participation: the third generation Talkwall

Ingwill Rasmussen, University of Oslo, Norway; Louis Major, University of Manchester, United Kingdom; Anja Amundrud, University of Oslo, Norway; Kari Anne Rødnes, University of Oslo, Norway; Jo Inge Johansen Frøyflog, University of South-Eastern Norway, Norway; Ole Smørðal, University of Oslo, Norway; Maren Omland, OsloMet, Norway

Session J: 1

Time: 14:45-16:15

Location: UOM_A03

INVITED SYMPOSIUM: AESTHETIC EXPERIENCE AS A TOOL FOR LEARNING AND DEVELOPMENT**Chair**

Laure KLOETZER, Institute of Psychology & Education,
University of Neuchâtel, Switzerland

Discussant

Antonio Iannaccone, University of Neuchâtel, Switzerland

"SIC EST": THE ARTEDUCATION OF MAESTRI DI STRADA VIDEO-NARRATED BY A GROUP OF ADOLESCENTES

ELISABETTA FENIZIA, University of Naples Federico II, Italy; Filomena Carillo, Non-profit Association Maestri di Strada, Italy; Santa Parello, University Federico II of Naples, Italy

Semiotising the aesthetic experience in education: multimodality in students' diaries

Ramiro Tau, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland; Laure KLOETZER, Institute of Psychology & Education, University of Neuchâtel, Switzerland

Choice Poetics in Interactive Digital Narrative Design Learning

Yasmeen ElGerbi, CUNY Graduate Center, Libya; Colette Daiute, The Graduate Center, CUNY, United States; John T. Murray, CUNY Graduate Center, United States

Learning from one's own aesthetic inner world: aesthetics as a modality of language

Maurin Coralie, Institut National de la Recherche pour l'Agriculture et L'Environnement, France

ANNOTATIONS:

SIG 10 INVITED SYMPOSIUM

Session J: 2

Time: 14:45-16:15

Location: AUTH_CH

INVITED PANEL: SUPPORTING RESEARCHERS AT RISK: THE KEY ROLE OF EUROPEAN ACADEMIA**Chair**

Ioanna Kostarella, Aristotle University of Thessaloniki,
Greece

Supporting Researchers at risk: the key role of European Academia

Joel Hanisek, SAR Europe, Maynooth University, Ireland; Andreas Takis, Aristotle University of Thessaloniki, Greece; Frank Albrecht, Alexander von Humboldt Foundation, Germany; Malamati Tsapoutzoglou, Aristotle University of Thessaloniki, Greece; Yudit Namer, University of Twente, Netherlands

Session J: 3

Time: 14:45-16:15

Location: HELEXPO_CC

INVITED SYMPOSIUM: CONTRIBUTIONS OF GREEK PSYCHOLOGICAL RESEARCH IN EDUCATION**Chair**

NIKOLAOS MAKRIS, Democritus University of Thrace,
Greece

Organiser

- Hellenic Psychological Society, Hellenic Psychological
Society, Greece

Discussant

NIKOLAOS MAKRIS, Democritus University of Thrace,
Greece

TPFRS: A new measure for assessing resilience in teachers

Athena Daniilidou, University of Macedonia, Greece; Maria Platsidou, University of Macedonia, Greece

What do Greek teachers need to better support students with special learning needs?

Eirini Karakasidou, Panteion University of Social and Political Sciences, Greece; Olga Lainidi, University of Leeds, United Kingdom; Anastassios Stalikas, Panteion University, Greece

The combined effect of cognitive factors on preprimary and primary school students' narrative skills

Alexandra Karousou, Democritus University of Thrace, Greece; Dimitra Oikonomakou, Democritus University of Thrace, Greece; Smaragda Kazi, Panteion University of Social and Political Sciences, Greece; Tryfonas Bikos, Democritus University of Thrace, Greece

Preservice teachers' epistemic and educational beliefs on their educational practices

Anastasia/Natassa Kyriakopoulou, National & Kapodistrian University of Athens, Greece; Irini Skopeliti, University of Patras, Greece

ANNOTATIONS:

INVITED SYMPOSIUM OF THE HELLENIC PSYCHOLOGICAL SOCIETY

Session J: 4

Time: 14:45-16:15

Location: UOM_CH

INVITED SYMPOSIUM: IMPROVING UNIVERSITY TEACHING THROUGH TEACHERS' PROFESSIONAL LEARNING AND DEVELOPMENT**Chair**

Jan Vermunt, Eindhoven University of Technology, Netherlands

Organisers

Perry den Brok, Eindhoven University of Technology, Netherlands; Frans Prins, Utrecht University, Netherlands

Discussant

Vincent Donche, University of Antwerp, Belgium

Academics' pedagogical training: Effects on teachers and students' outcomes, a multilevel analysis

Marian Ilie, West University of Timisoara, Romania; Jan Vermunt, Eindhoven University of Technology, Netherlands; Velibor Mladenovici, West University of Timisoara, Romania; Zselyke Pap, Department of Psychology, West University of Timisoara, Romania; Laurențiu P. Maricuțoiu, Center for Academic Development and Department of Psychology, West University of Timisoara, Romania

How does developing an innovation as part of a PDI impact mid-career teachers' learning?

Indira Day, Utrecht University, Netherlands; Tim Stevens, Eindhoven University of Technology, Netherlands; Frans Prins, Utrecht University, Netherlands; Perry den Brok, Eindhoven University of Technology, Netherlands; Jan Vermunt, Eindhoven University of Technology, Netherlands

HE pedagogy developers' regulation skills and ways to develop their own pedagogical expertise

Mari Murtonen, University of Turku, Finland; Henna Virtanen, University of Turku, Finland; Henna Vilppu, University of Turku, Finland

Supporting teachers' learning in the context of self-initiated educational innovations: what works?

Tim Stevens, Eindhoven University of Technology, Netherlands; Remco Coppoolse, Utrecht University of applied science, Netherlands; Roeland M. Van der Rijst, ICLON-Leiden University Graduate School of Teaching, Netherlands; Arjen de Vetten, VU University Amsterdam, Netherlands; Indira Day, Utrecht University, Netherlands; Perry den Brok, Eindhoven University of Technology, Netherlands; Frans Prins, Utrecht University, Netherlands; Jan Vermunt, Eindhoven University of Technology, Netherlands

ANNOTATIONS:
SIG 4 INVITED SYMPOSIUM

Session J: 5

Time: 14:45-16:15

Location: AUTH_DC2

SYMPOSIUM: UNDERSTANDING AND DEVELOPING TEACHER PRACTICES THAT PROMOTE SELF-REGULATED LEARNING**Chair**

Michael Lawson, Flinders University, Australia

Discussant

Patricia Alexander, University of Maryland, United States

Using the COACTIV model to explain teachers' SRL professional competence

Charlotte Dignath, TU Dortmund University, Germany; Mareike Kunter, DIPF | Leibniz Institute for Research and Information in Education, Germany

A "Triple SRL-SRT Framework" for Supporting Teachers Self-regulation and Students' Outcomes

Bracha Kramarski, Bar-Ilan University, Israel; Orna Heaysman, Hemdat College of Education, Israel

Helping pre-service teachers improve the indirect promotion of SRL in the classroom

Helen Stephenson, University of South Australia, Australia; Sean Kang, The University of Melbourne, Australia; Wendy Scott, The University of Melbourne, Australia

How teachers promote self-regulated learning: A classroom observation study

Stella Vosniadou, Flinders University, Australia; Erin Bodner, Flinders University, Australia; Michael Lawson, Flinders University, Australia; Lorraine Graham, The University of Melbourne, Australia

Session J: 6

Time: 14:45-16:15

Location: AUTH_T002

SYMPOSIUM: DIFFERENT PERSPECTIVES ON THE IMPACT OF COGNITIVE SKILLS ON EARLY ACADEMIC ACHIEVEMENT**Chair**

Michelle N. Maurer, University of Oslo, Norway

Discussant

Bert De Smedt, KU Leuven, Belgium

Cognitive skills and academic achievement: a person-centered approach.

Erica Kamphorst, University of Groningen, Netherlands; Gerda van der Veer, University of Groningen, Netherlands; Suzanne Houwen, University of Groningen, Netherlands; Marja Cantell, University Groningen, Netherlands; Alexander Minnaert, University of Groningen, Netherlands

The development of handwriting processes and involved cognitive processes

Lidia Jana Truxius, PHBern, University of Teacher Education, Switzerland; Michelle N. Maurer, University of Oslo, Norway; Judith Sägesser, University of Teacher Education Bern, Switzerland; Claudia Roebers, University of Bern, Switzerland

Executive Functions: Development and differential profiles in first grade children

Michelle N. Maurer, University of Oslo, Norway; Claudia Roebers, University of Bern, Switzerland

A network model of cognitive and affective variables related to mathematics achievement

Anne van Hoogmoed, Radboud University, Netherlands; Paul Adriaanse, Radboud University Nijmegen, Netherlands; Myrthe Vermeiden, Radboud University Nijmegen, Behavioural Science Institute, Netherlands; Rianne Weggemans, Radboud University Nijmegen, Netherlands

Session J: 7

Time: 14:45-16:15

Location: AUTH_DC3

SYMPOSIUM: STUDENTS AS CITIZENS: EXPLORING LIVED DEMOCRATIC CITIZENSHIP THROUGH ATTITUDES AND BEHAVIORS**Chair**

Bjorn Wansink, Utrecht University, Netherlands

Organiser

Minke Krijnen, Leiden University, Netherlands

Discussant

Jeremy Stoddard, University of Wisconsin - Madison, United States

Diverse Sources of Trust: Sense of School Membership, Generalized Social Trust and School Diversity

Willemijn Rinnooy Kan, Amsterdam University of Applied Sciences (AUAS), Netherlands; Anke Munniksma, University of Amsterdam, Netherlands; Monique Volman, University of Amsterdam, Netherlands

Teachers Are Important for Political Tolerance – Results from ICCS 2016

Johanna Fee Ziemes, University of Duisburg-Essen, Germany

CANCELLED: The Imagined Other in Classroom Deliberations (...)

Lee Jerome, Middlesex University, United Kingdom; Anna Liddle, Sheffield Hallam University, United Kingdom; Helen Young, London South Bank University, United Kingdom

Teacher Practices Shape The Elementary Classroom as Practice Ground for Democracy

Minke Krijnen, Leiden University, Netherlands; Bjorn Wansink, Utrecht University, Netherlands; Jan van Tartwijk, Utrecht University, Netherlands; Tim Mainhard, Leiden University, Netherlands

Session J: 8

Time: 14:45-16:15

Location: UOM_CR

SYMPOSIUM: A LOOK BEHIND IMMERSIVE SCENES: EXPERIMENTS ON EFFECTIVE LEARNING IN VIRTUAL REALITY ENVIRONMENTS**Chairs**

Christian Hartmann, Technical University Munich, Germany; Valentina Nachtigall, Ruhr University Bochum, Germany

Organisers

Christian Hartmann, Technical University Munich, Germany; Valentina Nachtigall, Ruhr University Bochum, Germany

Discussant

Eleni Kyza, Cyprus University of Technology, Cyprus

Imagine & immerse yourself: Does visual-spatial-imagery moderate learning in virtual reality?

Christian Hartmann, Technical University Munich, Germany; Maria Bannert, Technical University of Munich (TUM), Germany

Embodied interaction in virtual reality for learning mathematics

Julia Chatain, ETH Zurich, Switzerland; Robert W. Sumner, ETH Zurich, Switzerland; Manu Kapur, ETH Zurich, Switzerland

Aids to learning in virtual reality: Adding individual and collaborative generative activities

Gustav Petersen, University of Copenhagen, Denmark; Valdemar Stenberdt, University of Copenhagen, Denmark; Richard E. Mayer, University of California, United States; Guido Makransky, University of Copenhagen, Denmark

Promoting cognitive processing of 360° videos through emotion regulation and collaboration

Valentina Nachtigall, Ruhr University Bochum, Germany; Selina Yek, Ruhr-University Bochum, Germany; Nikol Rummel, Ruhr University Bochum, Germany

Session J: 9

Time: 14:45-16:15

Location: AUTH_DC1

SYMPOSIUM: SELF-REGULATED LEARNING AT DIFFERENT LEVELS OF GRANULARITY: FROM SINGLE LESSONS TO ENTIRE LECTURES**Chairs**

Luise von Keyserlingk, University of Tübingen, Germany; Fani Lauerermann, University of Bonn, Germany

Discussant

Philip Winne, Simon Fraser University, Canada

Triangulation and Integration of Measuring Self-regulated Learning with Trace and Think Aloud Data

Yizhou Fan, Peking University, China; Mladen Raković, Monash University, Australia; Joep van der Graaf, Radboud University Nijmegen, Netherlands; Lyn Lim, Technical University of Munich, Germany; Shaveen Singh, Monash University, Australia; Johanna Moore, University of Edinburgh, United Kingdom; Inge Molenaar, Radboud University Nijmegen, Netherlands; Maria Bannert, Technical University of Munich (TUM), Germany; Dragan Gasevic, Monash University, Australia

Studying Cyclical and Temporal Aspects of Self-Regulated Learning with Validated Digital Trace Data

Jeff Greene, university of north carolina at chapel hill, United States; Matthew Bernacki, University of North Carolina at Chapel Hill, United States; Michael Berro, University of North Carolina at Chapel Hill, United States; Robert Plumley, University of North Carolina at Chapel Hill, United States; Shelbi Kuhlmann, University of North Carolina at Chapel Hill, United States

From Time to Deadline to Time After Deadline: Steady Study Activities are Key for Course Performance

Luise von Keyserlingk, University of Tübingen, Germany; Fani Lauerermann, University of Bonn, Germany; Renzhe Yu, Teachers College, Columbia University, United States; Qiuji Li, University of California, Irvine, United States; Jutta Heckhausen, University of California, Irvine, United States; Jacquelynne S. Eccles, University of California, Irvine, United States; Richard Arum, University of California, Irvine, United States

Self-testing in Higher Education: What Predicts the Use of Self-testing and Who Achieves Their Goals

Jakob Schwerter, Institute for School Development Research (IFS), TU Dortmund, Germany; Fani Lauerermann, University of Bonn, Germany; Taiga Brahm, University of Tübingen, Germany; Kou Murayama, University of Tübingen, Germany

Session J: 10

Time: 14:45-16:15

Location: UOM_A02

SYMPOSIUM: WELL-BEING IN SCHOOL AS A HOPE IN CHALLENGING TIMES: INSIGHTS FROM VARIOUS PERSPECTIVES**Chair**

Caroline Mansfield, University of Notre Dame Australia, Australia

Organisers

Tina Hascher, University of Bern, Institute of Educational Science, Switzerland; Julia Morinaj, University of Bern, Switzerland

Discussant

Daniela Raccanello, University of Verona, Italy

Framing teacher well-being: A study with Portuguese teachers

Francisco Peixoto, ISPA - Instituto Universitário | Center for Research in Education, Portugal; José Castro Silva, ISPA-Instituto Universitário, Portugal

Teachers' and principals' work engagement and work burnout during the pandemic

Katriina Salmela-Aro, Helsinki University, Finland; Katja Upadyaya, University of Helsinki, Finland; Lauri Hietajärvi, University of Helsinki, Finland

Understanding the resilience process that supports teacher well-being

Isabelle Kruppenacher, Abteilung für Schul- und Unterrichtsforschung, Institut für Erziehungswissenschaft, Bern, Switzerland; Irene Guidon, PHBern, University of Teacher Education, Switzerland; Tina Hascher, University of Bern, Institute of Educational Science, Switzerland; Julia Morinaj, University of Bern, Switzerland; Caroline Mansfield, University of Notre Dame Australia, Australia; Susan Beltman, Curtin University, Australia

How to choose strategies to enhance art-of-living and well-being in high school students

Corinna Anders, TU Darmstadt, Germany

Session J: 11

Time: 14:45-16:15

Location: UOM_R08

SINGLE PAPER: TWITTER COMMUNITIES: INFORMAL LEARNING AND SOCIAL ASPECTS**Chair**

Sietske van Viersen, Utrecht University, Netherlands

The Social Side of Digitization: Knowledge Mobilization among Educational Professionals on Twitter

Martin Rehm, University of Regensburg, Germany; Lennart Klein, Universität Tübingen, Germany; Tim Fütterer, University of Tübingen, Germany; Christian Fischer, Hector Research Institute of Education Sciences and Psychology, Germany; Marie Lockton, University of California, San Diego, United States; Anita Caduff, University of California, San Diego, United States; Alan J Daly, University of California, San Diego, United States

Twitter's Potential for Knowledge Brokers to Improve their Knowledge Mobilization Efforts

Anita Caduff, University of California, San Diego, United States; Martin Rehm, University of Regensburg, Germany; Marie Lockton, University of California, San Diego, United States; Alan Daly, University of California, San Diego, United States

How do Teachers in German Twitter Communities Share, Perceive, and Use Materials?

Fitore Morina, University of Tübingen, Germany; Tim Fütterer, University of Tübingen, Germany; Joshua M. Rosenberg, University of Tennessee-Knoxville, United States; Jeffrey Carpenter, Elon University, United States; Christian Fischer, University of Tübingen, Germany

Online Communities of Practice on Twitter: A Case Study of the German Educational Twittersphere

Christian Fischer, University of Tübingen, Germany; Fitore Morina, University of Tübingen, Germany; Conrad Borchers, Carnegie Mellon University, United States; Lennart Klein, University of Tübingen, Germany

Complementing "Traditional" School Organization - Leveraging Social Opportunity Spaces on Twitter

Martin Rehm, University of Regensburg, Germany; Marie Lockton, University of California, San Diego, United States; Anita Caduff, University of California, San Diego, United States; Regina Mulder, University of Regensburg, Germany; Alan J Daly, San Diego State University & University of California, San Diego, United States

Session J: 12

Time: 14:45-16:15

Location: UOM_A13

SINGLE PAPER: TEACHER SELF-EFFICACY**Chair**

Martijn Meeter, Vrije Universiteit Amsterdam, Netherlands

Self-Efficacy and Emotions in Teachers: A Random Intercept Cross-Lagged Panel Model

Barbara Balaž, Catholic University of Croatia, Croatia; Irena Burić, University of Zadar, Croatia; Mara Šimunović, Institute of Social Sciences Ivo Pilar, Croatia

Instructional Self-Efficacy and Student Resistance: Beliefs Matter

jenefer husman, University of Oregon, United States; Maura Borrego, University of Texas - Austin, United States; Cynthia Finelli, University of Michigan, United States; Michael Prince, Bucknell University, United States; Lea Marlör, University of Michigan, United States

Patterns of Teacher Self-Efficacy: A Latent Profile Analysis with Secondary School Teachers.

Jing Huang, Lingnan University, Hong Kong; Youliang Zhang, Beijing University of Technology, China

"I believe in my skills!" - A meta-analysis on intervention studies promoting teacher self-efficacy.

Janina Täschner, Technical University of Munich (TUM) & ZIB (Centre for International Student Assessment), Germany; Doris Holzberger, Technical University of Munich (TUM) & ZIB (Centre for International Student Assessment), Germany

Session J: 13

Time: 14:45-16:15

Location: UOM_A07

SINGLE PAPER: CHILDREN'S NUMERACY LEARNING AND DEVELOPMENT**Chair**

Hans Christian Arnseth, University of Oslo, Norway

Underlying mechanisms of number comparison skills in young children

David Munez, National Institute of Education / Nanyang Technological University, Singapore; Josetxu Orrantia, University of Salamanca, Spain; Rosario Sánchez, University of Salamanca, Spain; Laura Matilla, Univeresity of Salamanca, Spain; Veronica Carreton, Universidad de Salamanca, Spain

How does early maths develop? A visual representation of domain-specific maths skills across time.

Zahra Siddiqui, UCL, United Kingdom; Laura Outhwaite, University College London, IOE, United Kingdom; Jo Van Herwegen, UCL Institute of Education, United Kingdom

Mediated paths from early fine motor and executive function skills to later math and reading fluency

Kiat Hui Khng, National Institute of Education/Nanyang Technological University, Singapore, Singapore; David Munez, National Institute of Education / Nanyang Technological University, Singapore; Beth Ann O'Brien, National Institute of Education/Nanyang Technological University, Singapore, Singapore; EeLynn Ng, National Institute of Education, Singapore

Executive function and academic outcomes across development: from kindergarten to secondary school

Dieuwer ten Braak, University of Stavanger, Norway; Ragnhild Lenes, University of Stavanger, Norway; Ingunn Størksen, University of Stavanger, Norway

Session J: 14

Time: 14:45-16:15

Location: AUTH_TE2

SINGLE PAPER: LEARNING AND PROFESSIONAL DEVELOPMENT IN HEALTHCARE EDUCATION**Chair**

Asa Makitalo, University of Gothenburg, Sweden

Professional development emanating from new technologies in nurses' work

Regina Mulder, University of Regensburg, Germany; L. Romina Bornhaupt, University of Regensburg, Germany; Patrick Beer, University of Regensburg, Germany

Evidence-Based Practices of nursing students during clinical internships

Carla Quesada-Pallarès, Universitat Autònoma de Barcelona, Spain; Anja Garone, University College Leuven Limburg, Belgium; Elena Roig Ester, Autonomous University of Barcelona, Spain; Ellen Westhof, University College Leuven Limburg, Belgium; Antonio Vega-Martínez, Autonomous University of Barcelona, Spain

Relational meta-work emerging during technology integration in primary care

Monika Nerland, University of Oslo, Norway; Isabel Brandenberger, University of Oslo, Norway; Mervi Hasu, University of Oslo, Norway

Expanding healthcare practice: meta-work generated when AMR healthcare processes are digitalised

Littlejohn Allison, University College London, United Kingdom; Koula Charitonos, The Open university UK, United Kingdom; Heli Kaatrakoski, University of Stavanger, Norway

Session J: 15

Time: 14:45-16:15

Location: UOM_A05

SINGLE PAPER: STUDENT ENGAGEMENT IN STEM AND LITERACY CLASSES**Chair**

Vasiliki Andreou, KU LEUVEN, Belgium

Conceptualizing domain-specific student engagement by combining qualitative methods

Elissavet Papageorgiou, Delft University of Technology, Netherlands; Jacqueline Wong, Utrecht University, Netherlands; Annoesjka J. Cabo, Delft University of Technology, Netherlands

Examining proximal group progress toward high-quality disciplinary engagement

Toni Rogat, Purdue University, United States; Britte Cheng, Menlo Education Research, United States; Cindy Hmelo-Silver, Indiana University, United States; Anne Traynor, Purdue University, United States; Temitope F. Adeoye, Purdue University, United States; Reina Fujii, Menlo Educational Research, United States; Alexandria Holmes, Purdue University, United States

Prosocial Education Supports Elementary Math and Science Classroom Climate and Engagement

Christi Bergin, University of Missouri, United States; Jennifer Foster, University of Missouri - Columbia, United States; Lindsay Brockmeier, University of Missouri/Columbia, United States; Bo Zhu, American Institutes for Research, United States; Ryan Williams, American Institutes for Research, United States; Cara Wylie, eMINTS National Center, United States

A Whole -School Approach to Developing Student Engagement in Literacy

Eithne Kennedy, Dublin City University, Ireland; Gerry Shiel, St. Patrick's College, Ireland

Session J: 16

Time: 14:45-16:15

Location: AUTH_T102

SINGLE PAPER: CREATIVE THINKING, CREATIVE METACOGNITION AND CREATIVITY-FOSTERING TEACHER BEHAVIORS**Chair**

Catalina Lomos, LISER - Luxembourg Institute for Socio Economic Research, Luxembourg

To What Extent Can Meta-Creative Pedagogy Foster Elementary School Students Creative Thinking?

Nurit Paz-Baruch, Bar Ilan University, Israel; Zemira Mevarech, Bar-Ilan University, Israel; Guy Grovas, School of Education, Bar-Ilan University, Israel

Do We Need Metacognition for Creativity? The Necessary Condition Analysis of Creative Metacognition

Marek Urban, Institute of Psychology of Czech Academy of Sciences, Czech Republic; Kamila Urban, Institute for Research in Social Communication, Slovak Academy of Sciences, Slovakia

Creative Problem Solving in Primary School Students

Mare van Hooijdonk, Radboud University Nijmegen, Netherlands; Tim Mainhard, Leiden University, Netherlands; Evelyn Kroesbergen, Radboud University, Netherlands; Jan van Tartwijk, Utrecht University, Netherlands

Creativity-Fostering Teacher Behaviors in Higher Education: A Transdisciplinary Systematic Review

Rene Brauer, Maastricht University, Netherlands; Jarrod Ormiston, University of Technology Sydney, Australia; Simon Beausaert, Maastricht University, Netherlands

Session J: 17

Time: 14:45-16:15

Location: UOM_A06

SINGLE PAPER: EMOTION AND AFFECT IN MATHEMATICS**Chair**

Erik De Corte, KU Leuven, Belgium

Antecedents and Consequences of Students' Emotion Profiles in Mathematics.

Tanja Held, University of Bern, Switzerland; Tina Hascher, University of Bern, Institute of Educational Science, Switzerland

Mathematics Emotions – Interaction Between Distance Learning and Math Performance

Anni Sydänmaanlakka, University of Helsinki, Finland; Jokke Häsä, University of Helsinki, Finland; Marja Holm, Finnish Institute for Health and Welfare, Finland; Markku Hannula, University of Helsinki, Finland

The relationship between affective factors and basic numeracy skills in pre-service teachers

Heidi Hellstrand, Åbo Akademi University, Faculty of Education and Welfare Studies, Finland; Johan Korhonen, Åbo Akademi University, Finland; Airi Hakkarainen, University of Turku, Finland; Pirjo Aunio, University of Helsinki, Finland; Anu Laine, University of Helsinki, Finland; Pekka Räsänen, University of Turku, Finland

Numerical and emotional conflict processing: Evidence from behavioral and pupil dilation data

Adrien Nicolay, Universität Innsbruck, Austria; Elise Klein, Université de Paris, Sorbonne Paris Cité, Paris, France; Ronen Hershman, Department of Psychology, University of Innsbruck, Innsbruck, Austria; Dorothea Hämmerer, Department of Psychology, University of Innsbruck, Innsbruck, Austria; Elisabeth Weiss, Department of Psychology, University of Innsbruck, Innsbruck, Austria; Liane Kaufmann, Department of Psychology, University of Innsbruck, Innsbruck, Austria

Session J: 18

Time: 14:45-16:15

Location: UOM_R05

SINGLE PAPER: ECOLOGICAL APPROACHES DURING THE COVID-19 PANDEMIC: FAMILIES AS A SYSTEM OF INFLUENCE**Chair**

Els Boshuizen, Open University of the Netherlands, Netherlands

Revisiting Bronfenbrenner's bioecological theory during a time of global crisis

Caroline Cohrsen, University of New England, Australia; Maria Hatzigianni, University of West Attica, Greece

Families in COVID-19 Pandemic - Relations of Family Type and Resources on Home Learning Environment

Luisa Prokupek, Otto-Friedrich-University of Bamberg, Germany; Franziska Cohen, University of Education Freiburg, Germany; Elisa Oppermann, University of Bamberg, Germany; Yvonne Anders, Otto-Friedrich-University of Bamberg, Germany

A cross-cultural study during a pandemic: Parental behaviors of young children in times of lockdown

Galila Meoded, Tel Aviv University, Israel; Dorit Aram, Tel Aviv University, Israel; Merav Asaf, Kaye Academic College of Education, Israel; Margalit Ziv, Kaye Academic College of Education, Israel; Katerina Shtereva, Sofia University, Sofia, Bulgaria; Carmen López-Escribano, Complutense University of Madrid, Madrid, Spain; Susan Sonnenschein, University of Maryland, Baltimore County, United States

How did Germany parents of primary school children perceive remote schooling during COVID pandemic?

Katrin Gottlebe, University Leipzig, Germany; Brigitte Latzko, University of Leipzig, Germany

Session J: 19

Time: 14:45-16:15

Location: UOM_A11

SINGLE PAPER: TEACHER COMPETENCIES AND STRATEGIES FOR IMPROVED TEACHING**Chair**

MARIA EVANGELOU TSITIRIDOU, International Hellenic University, Greece

Analyzing teaching strategies to promote oral communication in the classroom by teachers in training

María Fernanda Rodríguez, Universidad Finis Terrae, Chile; Camila Barahona, Pontificia Universidad Católica de Chile, Chile

Comparing Experienced and Novice Teachers' Visual Attention to Students' Hand-Raising Behavior

Tina Seidel, Technische Universität München, Germany; Christian Kosel, TUM School of Education, Germany; Ricardo Böheim, Technical University of Munich, Germany; Doris Holzberger, Technical University of Munich (TUM) & ZIB (Centre for International Student Assessment), Germany; Katharina Schnitzler, Department Erziehungswissenschaft der Universität Potsdam, Germany; Jürgen Pfeffer, Professorship of Computational Social Science and Big Data, Germany; Maria Bannert, Technical University of Munich (TUM), Germany

Promoting teachers' diagnostic competence in self-regulated learning

Kerstin Baeuerlein, University of Applied Sciences and Arts Northwestern Switzerland, Switzerland; Sabrina Brunner, PH FHNW, Switzerland; Xenia-Lea Weber, Ruhr-University Bochum, Germany; Ferdinand Stebner, University of Osnabrück, Germany; Joachim Wirth, Ruhr-University Bochum, Germany; Yves Karlen, University of Zurich, Switzerland

Any experience?: Linking teacher efficacy, professional learning community and experiential learning

Takumi Yada, Finnish Institute for Educational Research, Finland; Akie Yada, University of Jyväskylä, Finland; Daisuke Choshi, Teikyo University, Japan; Tetsuhito Sakata, Otsuma Women's University, Japan; Takehiro Wakimoto, Yokohama National University, Japan; Masahiro Nakada, Shirayuri University, Japan

Session J: 20

Time: 14:45-16:15

Location: UOM_R09

SINGLE PAPER: MINDSETS, ACHIEVEMENT AND BELIEFS**Chair**

Andrienne Kerckhoffs, Open Universiteit, Department of Online Learning and Instruction, Netherlands

Elementary school students' mindsets and attentional neural processing of feedback

Ita Puusepp, University of Helsinki, Finland; Tanja Linnavalli, University of Helsinki, Finland; Tuisku Tammi, University of Helsinki, Finland; Minna Huotilainen, University of Helsinki, Finland; Teija Kujala, University of Helsinki, Finland; Sonja Laine, University of Helsinki, Finland; Elina Kuusisto, Tampere University, Finland; Kirsi ja Tirri, University of Helsinki, Finland

Children's gender stereotypes in STEM ability following a growth mindset intervention

Fidelia Law, University of Exeter, United Kingdom; Luke McGuire, University of Exeter, United Kingdom; Mark Winterbottom, University of Cambridge, UK, United Kingdom; Adam Rutland, University of Exeter, United Kingdom

Parents in learning: The influence of mindsets and behavior on students' reading achievement

Caroline Villiger, University of Teacher Education Bern, Switzerland; Nadine Schuler, PH Bern - School of Teacher Education, Switzerland; Edith Niederbacher, University of Applied Sciences and Arts Northwestern Switzerland, Switzerland

Is your mind set? Growth mindsets of students and teachers and their interaction

Silke Hertel, Ruprecht-Karls-Universität Heidelberg, Germany; Johannes Jud, University of Zurich, Switzerland; Carmen Nadja Hirt, University of Applied Sciences and Arts Northwestern Switzerland (FHNW), Switzerland; Yves Karlen, University of Zurich, Switzerland

Session J: 21

Time: 14:45-16:15

Location: UOM_A10

SINGLE PAPER: PRE-SERVICE TEACHERS' DIGITAL LITERACY AND LEARNING**Chair**

Boris Eckstein, University of Teacher Education Zurich, Switzerland

Using knowledge maps as attention-directing support for writing instructional texts

Inka Haehnlein, Martin Luther University Halle-Wittenberg, Germany; Pablo Pirnay-Dummer, Martin-Luther-Universität Halle-Wittenberg, Germany

Promoting Media-Didactic Skills through Multimedia Tools – Influencing Factors on Learning Success

Katharina Frank, Johannes Gutenberg-Universität Mainz, Germany; Olga Zlatkin-Troitschanskaia, Johannes Gutenberg-Universität Mainz, Germany; Jasmin Schlax, Johannes Gutenberg-Universität Mainz, Germany; Christian Dormann, Johannes Gutenberg-Universität Mainz, Germany; Sebastian Brueckner, Chair of business education, Germany

Utility-Value Interventions Support Technology-Related Knowledge Integration but not Learning

Iris Backfisch, University of Tuebingen, Germany; Leonie Sibley, University of Tuebingen, Germany; Andreas Lachner, University of Tuebingen, Germany; Kenneth Tulku Kirchner, University of Tuebingen, Germany; Christoff Hische, University of Tuebingen, Germany; Katharina Scheiter, University of Potsdam, Germany

Video Annotations to Support Pre-Service Teachers' Professional Vision for Technology Integration

Franziska Tschönhens, University of Tuebingen, Germany; Ulrike Franke, University of Tuebingen, Germany; Tim Fütterer, University of Tuebingen, Germany; Andreas Lachner, University of Tuebingen, Germany

Session J: 22

Time: 14:45-16:15

Location: UOM_R02

POSTER PRESENTATION: PARENTAL INVOLVEMENT IN LEARNING

Chair

Thorben Jansen, Leibniz-Institut für die Pädagogik der Naturwissenschaften und Mathematik, Germany

Interaction effect between parenting and teacher support on students' help-seeking behavior
Ayafumi Goto, Gifu Shotoku Gakuen University, Japan

Shifting online early: Online vs. face-to-face early childhood STEM parent-engagement workshop
Mona Wong, Yew Chung College of Early Childhood Education, Hong Kong; Brad Chan, Yew Chung College of Early Childhood Education, Hong Kong

Free access to a digital library at home: The panacea for home reading by G2 beginning readers?
Maria T. Sikkema-de Jong, Leiden University, Netherlands; Simone Vogelaar, Education and Child studies, Leiden University, Netherlands; Jane Pieplenbosch, Utrecht University, Netherlands; Ralph Rippe, Education and Child studies, Leiden University, Netherlands

An investigation of the relation between household chaos and students' academic outcomes
Xiaozi Gao, The Education University of Hong Kong, Hong Kong; Frank Tian-fang Ye, The Hong Kong Polytechnic University, Hong Kong; Kerry Lee, The Education University of Hong Kong, Hong Kong; Lan Yang, The Education University of Hong Kong, Hong Kong; Kuen Fung Sin, The Education University of Hong Kong, Hong Kong

Linking Family Economic Pressure to Early Chinese Reading and Writing Skills
Ian Lam, The Education University of Hong Kong, Hong Kong; Kevin Kien Hoa Chung, The Education University of Hong Kong, Hong Kong

The role of the home in children's critical reading skills development: A Delphi study
Leena Paakkari, University of Jyväskylä, Faculty of Sport and Health Sciences, Finland; Jenni Ruotsalainen, University of Jyväskylä, Finland; Henri Lahti, University of Jyväskylä, Finland; Markus Kulmala, University of Jyväskylä, Faculty of Sport and Health Sciences, Finland; Panayiota Kendeou, University of Minnesota, United States; Tiia-Liina Raittila, University of Jyväskylä, Finland; Mari Manu, University of Jyväskylä, Finland; Jenni Salminen, University of Jyväskylä, Finland; Minna Torppa, University of Jyväskylä, Finland

Session J: 23

Time: 14:45-16:15

Location: UOM_R03

POSTER PRESENTATION: IN-SERVICE TEACHERS' PROFESSIONAL DEVELOPMENT

Chair

Nora McIntyre, University of Southampton, United Kingdom

Dialogic Teaching Development Program: what about professional identity for changing?
MARIBEL CALDERON, Universidad Católica Silva Henríquez, Chile; Marisol Gomez, Universidad Alberto Hurtado, Chile

Classroom Observations: how teachers teach learning strategies?
Mikk Granström, Tallinn University, Estonia; Eve Kikas, Tallinn University, Estonia; Eve Eisenschmidt, Tallinn University, Estonia

Correlations Between Biology Teachers' Self-Reflection, TPACK and its Reflection in Practice
Jörg Zumbach, University of Salzburg, Austria; Lena von Kotzebue, University of Salzburg, Austria; Bettina Mann, University of Salzburg, Austria

Engaged teachers and well-being: The moderating role of burnout
Caterina Fiorilli, University of LUMSA, Italy; Giacomo Angelini, LUMSA University of Rome, Italy; Vanessa Marchetti, Free University Maria Santissima Assunta, Italy; Luciano Romano, European University of Rome, Italy

Design-based Research at scale: teacher professional development program on technology-enhanced math
Jüri Kurvits, Tallinn University, Estonia; Marina Kurvits, Tallinn University, Estonia; Tobias Ley, Danube University Krems, Austria; Kairit Tammets, Tallinn University, Estonia

Session J: 24

Time: 14:45-16:15

Location: UOM_R01

POSTER PRESENTATION: SIMULATION-BASED LEARNING

Chair

Juliette Desiron, University of Zürich, Switzerland

Counselling competence of student teachers – development of an action-oriented assessment format

Philipp Wotschel, Paderborn Centre for Educational Research and Teacher Education - PLAZ-Professional School - University of Paderborn, Germany; Christoph Vogelsang, Paderborn University, Germany; Jana Meier, University of Paderborn, Germany, Germany; Thomas Janzen, PLAZ Professional School - Paderborn University, Germany

No Silver Bullet: Development of a first Sketch of a Prompt Design for Vocational Education Students

Herbert Thomann, University Mannheim, Germany; Viola Deutscher, University of Mannheim, Germany; Andreas Rausch, University of Mannheim, Germany; Juergen Seifried, University of Mannheim, Germany

Simulation based learning for facilitating understanding of others' emotions in preservice teachers

Shira Iluz, Bar Ilan University, Israel; Jacob Israelashvili, Bar Ilan University, Israel; Yaacov Boaz Yablon, Bar-Ilan University, Israel

How do student teachers perceive a novel VR environment for students?

Florentine Hicketier, Friedrich-Schiller-University Jena, Germany; Mathias Dehne, Friedrich Schiller University Jena, Germany; Tova Michalsky, Bar-Ilan University, Israel; Engin Ader, Boğaziçi University, Türkiye; Alexander Groeschner, Friedrich Schiller University Jena, Germany

Preservice teachers' motivations and perceived benefits of using a decision simulator

Eli Lejoneberg, University of Oslo, Norway; Eyvind Elstad, University of Oslo, Norway; Katrine Nesje, University of Oslo, Norway

The role of executive functions when learning in authentic learning environments

Maik Achtner, LMU Munich, Germany; Stefan Ufer, Ludwig-Maximilians-Universität (LMU), Germany

Session J: 25

Time: 14:45-16:15

Location: UOM_R04

POSTER PRESENTATION: MOTIVATIONAL, COGNITIVE AND TEACHING PROCESSES

Chair

Belinda Merkle, University of Mannheim, Germany

Does domain specific mindset make a difference in learning? Two metanalysis

Madalin Marian Deliu, University of Salamanca, Spain; José Ricardo García Pérez, University of Salamanca, Spain

The Role of Conditional Parental Support in the Development of Impostorism

Thérèse Bouffard, Université du Québec à Montréal, Canada; Carole Vezeau, Université du Québec à Montréal, Canada; Pascal Pansu, Université Grenoble Alpes, France

Situational interest, perceptions of task difficulty and Motivation2Learn more

Luke K. Fryer, The University of Hong Kong, Hong Kong; Alex Shum, The University of Hong Kong, Hong Kong

Checkmate: Examining Chess Masters' Expertise in Relation to Interest and Motivation

Eric Schoute, University of Maryland, United States; Joshua Jaffe, University of Maryland, United States; Doug Lombardi, University of Maryland, College Park, United States

On making biology education meaningful: Students' motivation for brewing beer

Niels Dohn, Aarhus University, Denmark

Are Peer and Teacher Relatedness Always Adaptive? An Analysis of (A)symmetric Congruence Processes

Elisa Santana Monagas, University of Las Palmas de Gran Canaria, Spain; Fernando NUNEZ-REGUEIRO, Université Grenoble Alpes, France; Jaime León, Universidad de las Palmas de Gran Canaria, Spain

Session J: 26

Time: 14:45-16:15

Location: UOM_GYM

ROUNDTABLE: MOTIVATION AND SELF-REGULATED LEARNING**Chair**

Leen Catrysse, Open Universiteit, Department of Online Learning and Instruction, Belgium

Innovative Behavior and Antecedents: Comparing Teachers with other Academic Professions

Verena Jörg, DIPF | Leibniz Institute for Research and Information in Education, Germany; Franziska Baier, Goethe-Universität Frankfurt, Germany; Ulrike Hartmann, German Institute for International Educational Research (DIPF), Germany; Stefanie Gaeckle, German Centre for Higher Education Research and Science Studies (DZHW), Germany; Mareike Kunter, DIPF | Leibniz Institute for Research and Information in Education, Germany

The development of students' ideas during group conversations in secondary education.

Martina van Uum, Radboud Teachers Academy, Netherlands; Petrie van der Zanden, Educational Institute of Social Sciences, Radboud University, Netherlands

Associations between 3-5-year-olds' motivational, metacognitive, and self-regulatory processes

Loren Marulis, Connecticut College, United States; Megan Bidgood, Connecticut College, United States

The influence of enjoyment on self-regulated learning from texts

Celina Saffertal, University of Education Karlsruhe, Germany; Anja Prinz-Weiß, University of Education Karlsruhe, Germany

Session J: 27

Time: 14:45-16:15

Location: AUTH_T202

WORKSHOP: DAISY ROBOT AND ARROW METHOD AIMING TO ASSIST CHILDREN WITH AUTISM SPECTRUM DISORDERS**Daisy Robot and ARRoW Method aiming to assist children with Autism Spectrum Disorders**

Nikolaos Fachantidis, University of Macedonia, Greece; Sofia Pliasa, University of Macedonia, Greece; Evgenia Soumelidou, University of Macedonia, Greece

Session J: 28

Time: 14:45-16:15

Location: UOM_A04

ICT DEMONSTRATION: REAL-TIME CODING OF LESSON ACTIVITIES WITH A MOBILE WEB APPLICATION**Real-time coding of lesson activities with a mobile web application**

Mikka Turkkila, University of Helsinki, Finland

Session K: 1

Time: 17:00-18:30

Location: HELEXPO_CC

INVITED SYMPOSIUM: A LOOK INTO THE CRYSTAL BALL: WHICH DIRECTIONS SHOULD METACOGNITION AND SRL RESEARCH TAKE?**Chairs**

Yves Karlen, University of Zurich, Switzerland; Charlotte Dignath, TU Dortmund University, Germany

Organisers

Yves Karlen, University of Zurich, Switzerland; Charlotte Dignath, TU Dortmund University, Germany

Discussants

Yves Karlen, University of Zurich, Switzerland; Charlotte Dignath, TU Dortmund University, Germany

Looking Backwards to Move Forward: Missed Opportunities in Developing Metacognition and SRL Theory

Daniel Dinsmore, University of North Florida, United States; Meghan Parkinson, University of North Florida, United States

SRL and emotions: Social and emotional factors in metacognition in the age of AI

Sanna Järvelä, University of Oulu, Finland; Márta Sobocinski, University of Oulu, Finland; Andy (Khanh Xuan) Nguyen, University of Oulu, Finland; Hanna Jarvenoja, University of Oulu, Finland

Looking into the future of metacognition and SRL research in early childhood

Deborah Pino-Pasternak, University of Canberra, Australia

From Intervention to Collaboration: Researchers Working With Teachers to Advance SRL in Classrooms

Nancy Perry, University of British Columbia, Canada

Assessing SRL and SRL implementation: A matter of multi?

Hilde Van Keer, Ghent University, Belgium

ANNOTATIONS:
SIG 16 INVITED SYMPOSIUM

Session K: 2

Time: 17:00-18:30

Location: AUTH_DC2

INVITED SYMPOSIUM: TRANSITIONS IN RESEARCHER EDUCATION AND CAREERS**Chair**

Erika Löfström, University of Helsinki, Finland

Organiser

Erika Löfström, University of Helsinki, Finland

Discussant

James Burford, University of Warwick, United Kingdom

Transitions in the PhD

Søren Bengtsen, Aarhus University, Denmark; Kelsey Inouye, University of Oxford, United Kingdom; Patrícia Alves, University of Porto, Portugal; James Burford, University of Warwick, United Kingdom; Montserrat Castelló Badia, Blanquerna, Universitat Ramon Llull, Spain; Dely Elliot, University of Glasgow, United Kingdom; Liezel Frick, Stellenbosch University, South Africa; Sofie Kobayashi, University of Copenhagen, Denmark; Lynn McAlpine, University of Oxford / McGill University, Canada; Paula Meesters, University Utrecht, Netherlands; Hatice Nuriler, Aarhus University, United Kingdom; Signe Skov, Aarhus University, Denmark

Potentials, challenges, uncertainties: Cross-cultural transitions in doctoral/post-doctoral context

Dely Elliot, University of Glasgow, United Kingdom

Academic mid and late career transitions and supervision

Irene Lokhtina, University of Central Lancashire Cyprus, Cyprus; Solveig Cornér, University of Helsinki, Finland; Cecilia Almlöv, Swedish University of Agricultural Sciences, Sweden; Erika Löfström, University of Helsinki, Finland; Kirsi Pyhälä, University of Helsinki, Finland; Henrik Viberg, Swedish University of Agricultural Sciences, Sweden; Paula Meesters, University Utrecht, Netherlands

Transitions in post-PhD careers

Inge Van der weijden, Leiden University, Netherlands; Isabelle Skakni, University of Applied Sciences and Arts Western Switzerland, Switzerland; Anna Sala Bubaré, Ramon Llull University, Spain

ANNOTATIONS:
SIG 24 INVITED SYMPOSIUM

Session K: 3

Time: 17:00-18:30

Location: UOM_A08

SYMPOSIUM: INTEREST ON THE MOVE**Chair**

Sanne Akkerman, Utrecht University, Netherlands

Organiser

Sanne Akkerman, Utrecht University, Netherlands

Discussant

Roger Saljo, University of Gothenburg, Sweden

Developmental dynamics of multiple interests

Jael Draijer, University Utrecht, Netherlands; Larike Bronkhorst, Utrecht University, Netherlands; Sanne Akkerman, Utrecht University, Netherlands

Developing interest pursuits during educational transitions

Joris Beek, University Utrecht, Netherlands; Larike Bronkhorst, Utrecht University, Netherlands; Sanne Akkerman, Utrecht University, Netherlands

Tracing objects of interest from school to out-of-school

Jaakko Hilppö, University of Helsinki, Finland

From interest to commitment towards sustainability. A critical psychology perspective.

Alfredo Jornet, Universitat de Girona, Spain

ANNOTATIONS:
PLEASE NOTE THAT THIS SESSION ROOM HAS CHANGED FROM AUTH_TE1 TO UOM_A08.

Session K: 4

Time: 17:00-18:30

Location: UOM_A03

SYMPOSIUM: TEACHERS' WELLBEING, SOCIAL SELF-EFFICACY, BURNOUT AND JOB-SATISFACTION IN ECE ACROSS FOUR COUNTRIES**Chair**

Vasileios Grammatikopoulos, International Hellenic University, Greece

Organiser

Anastasia Vatou, International Hellenic University, Greece

Discussant

Eleni Tympa, International Hellenic University, Greece

Testing the Construct Validity and Cross-Country Comparability of a Teacher Wellbeing Measure

Demos Michael, Center for the Advancement of Research & Development in Educational Technology (CARDET), Cyprus; Andri Agathokleous, Institute of Development, Cyprus; Vicky Charalambous Charalambous, Institute of Development, Cyprus; Christos Pezirkianidis, Department of Psychology, Greece; Charalambos Vrasidas, CARDET - University of Nicosia, Cyprus

Teachers' social self-efficacy in cross-national perspective

Anastasia Vatou, International Hellenic University, Greece; George Manolitsis, University of Crete, Greece; Maria Evangelou-Tsitiridou, International Hellenic University, Greece; Vasiliou Oikonomides, University of Crete, Greece; Maria Kyriotaki, University of Crete, Greece; Angeliki Mouzaki, University of Crete, Greece; Evridiki Zachopoulou, International Hellenic University, Greece; Vasileios Grammatikopoulos, International Hellenic University, Greece

Burnout in early childhood education: cross-cultural factorial validity of MBI-ES

Ana Rodrigues de Lemos, Faculty of Psychology and Educational Sciences of the University of Porto, Portugal; Filipe Piedade, University of Porto, Portugal; Tiago Ferreira, University of Porto, Portugal; Carolina Guedes, University of Porto, Portugal; Teresa Leal, University of Porto, Portugal; Catarina Grande, University of Porto, Portugal; Diana Alves, University of Porto, Portugal; Joana Cadima, University of Porto, Portugal

Early childhood teachers' job-satisfaction across four countries

Demos Michael, Center for the Advancement of Research & Development in Educational Technology (CARDET), Cyprus; Anastasia Vatou, International Hellenic University, Greece; Katerina Krousorati, International Hellenic University, Greece; Vicky Charalambous, Institute of Development, Cyprus; Maria Evangelou-Tsitiridou, International Hellenic University, Greece; Charalambos Vrasidas, CARDET - University of Nicosia, Cyprus; Evridiki Zachopoulou, International Hellenic University, Greece; Vasileios Grammatikopoulos, International Hellenic University, Greece

Session K: 5

Time: 17:00-18:30

Location: AUTH_TE2

SYMPOSIUM: LET'S PLAY – SOCIAL PLAY AS MEAN AND GOAL FOR LEARNING IN INCLUSIVE EDUCATION**Chair**

Lucas Deutzmann, University of Potsdam, Germany

Organisers

Florianne Rademaker, University of Groningen, Netherlands; Maria Gladh, Stockholm University, Sweden; Hanna Ginner Hau, Stockholm University, Sweden; Winnie-Karen Giera, Institute of German Studies, University of Potsdam, Germany

Discussant

Elisa Kupers, University of Groningen, Netherlands

Disabled in play? A multiple case study on SEN students' engagement in cooperative play activities

Florianne Rademaker, University of Groningen, Netherlands; Elisa Kupers, University of Groningen, Netherlands

Studying a peer-based intervention to test the concept of explicit teaching social play skills

Maria Gladh, Stockholm University, Sweden; Eva Siljehag, Department of Special Education, Stockholm University, Sweden; Mara Westling Allodi, Stockholm University, Sweden; Samuel L. Odom, Frank Porter Graham Child Development Institute, Chapel Hill School of Education, University of North Carolina, Chapel Hill, NC, United States

Everyone is playing! A participatory theater project to promote reading competence

Winnie-Karen Giera, Institute of German Studies, University of Potsdam, Germany; Sara Hauser, Institute of German Studies, University of Potsdam, Germany

Guided play and narrative skills - promoting participation and engagement for each child

Hanna Ginner Hau, Stockholm University, Sweden; Heidi Selenius, Stockholm University, Sweden; David Backlund, Department of Special Education, Stockholm University, Sweden

Session K: 6

Time: 17:00-18:30

Location: AUTH_T002

SYMPOSIUM: NEW PERSPECTIVES IN UNRAVELING THE DIFFICULTIES IN FRACTION UNDERSTANDING**Chair**

Wim Van Dooren, KU Leuven, Belgium

Organisers

Wim Van Dooren, KU Leuven, Belgium; Jo Van Hoof, University of Turku, Finland

Discussant

Xenia Vamvakoussi, University of Ioannina, Greece

Equivalent fractions are not equal on the mental number line

Georgios Thoma, Loughborough University, United Kingdom; Julia Bahnmüller, Loughborough University, United Kingdom; Jessica Maisey, Tampere University, Finland; Antero Lindstedt, Tampere University, Finland; Kristian Kiili, Tampere University, Finland; Manuel Ninaus, University of Graz, Austria; Korbinian Moeller, Loughborough University, United Kingdom

The roles of magnitude processing, biases, and benchmarking in fraction comparison tasks

Timo Leuders, University of Education Freiburg, Germany; Katharina Loibl, University of Education Freiburg, Germany; Frank Reinhold, University of Education Freiburg, Germany

Inhibition in the processing of rational numbers: A correlational study with fifth graders

Karen De Keersmaeker, KU Leuven, Belgium; Wim Van Dooren, KU Leuven, Belgium; Jo Van Hoof, University of Turku, Finland

The link between conceptual change and mathematics anxiety: the case of fractions

Jo Van Hoof, University of Turku, Finland; Hilma Halme, University of Turku, Finland; Minna Hannula-Sormunen, University of Turku, Finland; Jake McMullen, University of Turku, Finland

Session K: 7

Time: 17:00-18:30

Location: AUTH_CH

SYMPOSIUM: USING DIGITAL TOOLS AND ANALYTICS TO PROMOTE REGULATION IN INDIVIDUAL AND COLLABORATIVE LEARNING**Chair**

Nikol Rummel, Ruhr University Bochum, Germany

Organisers

Nikol Rummel, Ruhr University Bochum, Germany; Inge Molenaar, Radboud University Nijmegen, Netherlands

Discussant

Susanne Lajoie, McGill University, Canada

Designing feedback interventions with learning analytics: Identifying students' information needs

Jacqueline Wong, Utrecht University, Netherlands; Ioana Jivet, Goethe University Frankfurt, Germany & DIPF, Germany; Manuel Valle Torre, Delft University of Technology, Netherlands; Gabrielle Martins Van Jaarsveld, Erasmus University Rotterdam, Netherlands; Ali Soleymani, Delft University of Technology, Netherlands; Martine Baars, Erasmus University Rotterdam, Netherlands; Marcus Specht, TU Delft, Netherlands

Automated feedback on causal diagrams for self-regulated learning at the metacomprehension level

Héctor J. Pijera-Díaz, Maastricht University, Netherlands; Behrooz Nikandish, University of Groningen, Netherlands; Gosse Bouma, University of Groningen, Netherlands; Janneke van de Pol, Utrecht University, Netherlands; Anique de Bruin, Maastricht University, Netherlands

Boundary conditions for leveraging group-level feedback for regulation of collaborative learning

Sebastian Strauß, Ruhr-University Bochum, Germany; Nikol Rummel, Ruhr University Bochum, Germany

Modelling Metacognitive Awareness with Epistemic Emotions in Collaborative Learning

Ahsen Çini, University of Oulu, Finland; Muhterem Dindar, Tampere University, Finland; Sanna Järvelä, University of Oulu, Finland

Session K: 8

Time: 17:00-18:30

Location: AUTH_DC3

SYMPOSIUM: TEACHING THE GLOBAL GOALS: TEACHER EDUCATION PROGRAMMES AS A CONDUIT FOR ACHIEVEMENT OF AGENDA 2030**Chair**

Ann-Kathrin Dittrich, University Innsbruck, Austria

Discussant

Denis Francesconi, University of Vienna, Austria

The integration of SDG 3 in Teacher Education for a sustainable future

Irma Eloff, University of Pretoria, South Africa

The integration of SDG 4 in Teacher Education for a sustainable future

Ann-Kathrin Dittrich, University Innsbruck, Austria

Forms of essentialisation of gender and culture in SDG 5 and the critical role of teacher(educators)

Evi Agostini, University of Vienna, Austria

Policies to address teacher shortages to achieve SDG 4 targets in Austria and South Africa

Vasileios Symeonidis, University of Education Freiburg, Germany

Session K: 9

Time: 17:00-18:30

Location: AUTH_DC1

SYMPOSIUM: VISUALIZING LEARNING PROCESSES IN LEARNING FROM TEXT AND MULTIMEDIA: AN EYE-TRACKING APPROACH**Chair**

Emmelien Merchie, Ghent University, Belgium

Organiser

Leen Catrysse, Open Universiteit, Department of Online Learning and Instruction, Belgium

Discussant

Tamara Van Gog, Utrecht University, Netherlands

How eye Read: A Social Network Approach

Leen Catrysse, Open Universiteit, Department of Online Learning and Instruction, Belgium; Tine van Daal, University of Antwerp, Belgium; Halszka Maria Jarodzka, Open Universiteit, Department of Online Learning and Instruction, Netherlands; Vincent Donche, University of Antwerp, Belgium; David Gijbels, University of Antwerp, Belgium

How do Primary School Students Read Mind Maps? A Process Mining Analysis of Eye-Tracking Patterns

Emmelien Merchie, Ghent University, Belgium; Sofie Heirweg, Ghent University, Belgium; Hilde Van Keer, Ghent University, Belgium

Can Video Models Help Debunk the Learning Styles Misconception When Reading in L2?

Ladislao Salmerón, University of Valencia, Spain; Juliana do Amaral, FEDERAL UNIVERSITY OF SANTA CATARINA, Brazil

Look Where I Look! Real-time Eye Movement Modeling Examples (EMME) in the Classroom

Halszka Maria Jarodzka, Open Universiteit, Department of Online Learning and Instruction, Netherlands; Diederick Niehorster, Lund University, Sweden; William Rosengren, Lund University, Sweden; Marcus Nyström, x, Sweden; Tamara Van Gog, Utrecht University, Netherlands

Session K: 10

Time: 17:00-18:30

Location: UOM_A02

SINGLE PAPER: MOTIVATION TO READ AND WRITE**Chair**

GIULIA VETTORI, University of Florence, Italy

Relationships between motivational factors and reading comprehension in bilingual fourth-graders

Choo Mui Cheong, The University of Hong Kong, Hong Kong; Yaping Liu, The University of Hong Kong, Hong Kong; Rex Hung Wai Ng, The University of Hong Kong, Hong Kong; Shek Kam Tse, The University of Hong Kong, Hong Kong

Group-based motivational profiles and their association with students' writing performance

Rui Alexandre Alves, University of Porto, Portugal; Ana Camacho, University of Porto, Portugal; Fien De Smedt, Ghent University, Belgium; Rui Maio, Faculty of Psychology and Educational Sciences of the University of Porto, Portugal; Joana Cadima, University of Porto, Portugal; Hilde Van Keer, Ghent University, Belgium

Writing Motivation and Ability Profiles and Transition after a Technology-Based Writing Intervention

Tania Maria Cruz Cordero, University of Delaware, United States; Joshua Wilson, University of Delaware, United States; Corey Palermo, Measurement Incorporated, United States; Halley Eacker, Measurement Incorporated, United States; Matthew Myers, University of Delaware, United States; Andrew Potter, University of Delaware, United States; Jessica Coles, Measurement Incorporated, United States

Exploring the relation between autonomy supportive teacher behavior and students' reading motivation

Nele Bleukx, KU LEUVEN, Belgium; Katrijn Denies, KU LEUVEN, Belgium; Hilde Van Keer, Ghent University, Belgium; Koen Aesaert, K.U.Leuven, Belgium

Session K: 11

Time: 17:00-18:30

Location: UOM_R09

SINGLE PAPER: EDUCATIONAL POLICY AND SCHOOL REFORM**Chair**

Yves Mühlematter, PHBern, University of Teacher Education; University of Zürich, Switzerland

The role and function of district superintendents: A systematic literature review

Mona Holmqvist, Lund University, Sweden; Martin Lantz Ekström, Malmö University, Sweden

School reform for the future? Change processes during the establishment of all-day schools

Michelle Jutzi, University of Teacher Education Bern, Switzerland; Barbara Stampfli, PHBern – University of Teacher Education, Switzerland; Regula Windlinger, Institut für Forschung, Entwicklung und Evaluation, PHBern, Switzerland; Ulrich Hostettler, University of Teacher Education Bern (PHBern), Switzerland

A Controversially Received Reform: The 2018 Renewal of Finnish Higher Education Student Admission

Risto Hotulainen, University of Helsinki, Finland; Sirkku Kupiainen, University of Helsinki, Finland; Irene Rämä, University of Helsinki, Finland

Opportunities & Challenges of Two Policy Measures to Reduce Educational Inequalities in Switzerland

Anja Winkler, University of Teacher Education Bern, Switzerland; Angela Rebecca Aegerter, University of Bern, Switzerland; Andrea Erzinger, University of Bern, Switzerland

Session K: 12

Time: 17:00-18:30

Location: UOM_A13

SINGLE PAPER: TECHNOLOGY-ENHANCED INSTRUCTIONAL DESIGN**Chair**

Karin Street, Western Norway University of Applied Sciences, Norway

Active Integration of Representations in Augmented Reality

Jule Krüger, University of Potsdam, Germany; Franziska Schacht, University of Duisburg-Essen, Germany; Daniel Bodemer, University of Duisburg-Essen, Germany

Learning by Explaining in School: Testing the Generalizability within a ManyClasses Study

Leonie Sibley, University of Tübingen, Germany; Heike Russ, University of Tübingen, Germany; Andreas Lachner, University of Tübingen, Germany

Do distributed practice reminders promote children's learning with a digital learning app?

Lea Nobbe, DIPF Frankfurt, Germany; Jasmin Breitwieser, DIPF | Leibniz Institute for Research and Information in Education, Germany; Daniel Biedermann, DIPF | Leibniz Institute for Research and Information in Education, Germany; Garvin Brod, DIPF | Leibniz Institute for Research and Information in Education, Germany

Implementing metacognitive prompts in segmented dynamic visualizations - Beneficial for learning?

Felix Krieglstein, Chemnitz University of Technology, Germany

Session K: 13

Time: 17:00-18:30

Location: UOM_R08

SINGLE PAPER: TEACHERS' PROFESSIONAL DEVELOPMENT: THE ROLE OF REFLECTIVE PRACTICES**Chair**

Ana Costa, University of Lisbon, Linguistics Center and Polytechnic Institute of Setúbal, Portugal

Role of impasse in teacher learning

Roman Švaříček, Masaryk University, Czech Republic; Klara Sedova, Masaryk University, Czech Republic; Zuzana Salamounova, Masaryk University, Czech Republic; Martin Sedlacek, Masaryk University, Czech Republic

I reflect today, this week, or never? An experience sampling study of teacher activities

Miriam Compagnoni, University of Zurich, Switzerland; Beat Rechsteiner, University of Zurich, Institute of Education, Switzerland; Flurin Gotsch, University of Zurich, Institute of Education, Switzerland; Katharina Maag Merki, University of Zurich, Switzerland; Andrea Wullschlegler, University of Applied Sciences and Arts Northwestern Switzerland PH (FHNW), Switzerland

"I know I don't know" - Does metacognitive accuracy moderate the validity of TPK self-assessments?

Ulrike Franke, University of Tübingen, Germany; Iris Backfisch, University of Tuebingen, Germany; Armin Fabian, University of Tuebingen, Germany; Patrizia Breil, Ruhr-University of Bochum, Germany; Katharina Scheiter, University of Potsdam, Germany; Andreas Lachner, University of Tübingen, Germany

Generative resistance as knowledge work: Teacher's Engagement with Assessment Criteria

Eli Tronsmo, University of Oslo, Norway; Hege Hermansen, Oslo Metropolitan University, Norway

Session K: 14

Time: 17:00-18:30

Location: UOM_CR

SINGLE PAPER: TEACHERS' DIGITAL COMPETENCE AND CHALLENGES**Chair**

Mika Igarashi, Hosen College of Childhood Education, Japan

Teacher Educators' positioning and task perception concerning the facilitation of digital competence

Ilka Nagel, Østfold University College / University of Oslo, Norway

Higher education teachers' profiles based on digital learning activities during online teaching

Anne Lohr, Ludwig-Maximilians-University Munich, Germany; Michael Sailer, LMU Munich, Germany; Frank Fischer, Ludwig-Maximilians-Universität (LMU), Germany

Teacher Educators' Challenges in the Context of Digital Transformation: A Mixed Methods Study

Marlene Wagner, University for Continuing Education Krems (Danube University Krems), Austria; Tobias Ley, Danube University Krems, Austria; Lydia Kammerer, Johannes Kepler University Linz, Austria; Christoph Helm, Johannes Kepler University Linz, Austria

Still an instrumental endeavor? Developing professional digital competence in teacher education

Synnøve H. Amdam, Volda University College, Norway; Toril Aagaard, University of Southeast Norway, Norway; Ilka Nagel, Østfold University College / University of Oslo, Norway; Karl Vika, NIFU, Norway; Fredrik Merk Røkenes, Norwegian University of Science and Technology, Norway

Session K: 15

Time: 17:00-18:30

Location: AUTH_T102

SINGLE PAPER: MULTICULTURAL EDUCATION: TEACHERS' ATTITUDES, BELIEFS AND VALUES**Chair**

Gonny Schellings, Eindhoven University of Technology, Netherlands

What predicts teachers' likeliness to intervene in situations of ethnicity-based exclusion?

Daria Khanolainen, University of Jyväskylä, Finland; Elena Semenova, Independent researcher, Unknown; Elvira Fatkhulova, Independent researcher, Unknown; Yulia Nesterova, University of Glasgow, United Kingdom

Norwegian preservice teachers' competence to teach in multicultural and multilingual classrooms.

Wenche Elisabeth Thomassen, University of Stavanger, Norway

Multicultural education, values and curriculum-content learning: a teacher training approach

ELENI PAPAGEORGIOU, Cyprus Pedagogical Institute, Cyprus; Pavlina Hadjitheodoulou-Loizidou, Cyprus Pedagogical Institute, Cyprus

International partnership in cooperation for democratic values in primary education

Natalia Demeshkant, Pedagogical University of Krakow, Poland; Stefanie Schnebel, University of Education Weingarten, Germany; Katarzyna Potyrala, Andrzej Frycz Modrzewski Krakow University, Poland; Mareike Brehmer, University of Agder, Norway; Hilke Rapp, PH Weingarten, Germany; Aslaug Kristiansen, University of Agder, Norway; Inger Marie Dalehette, University of Agder, Norway; kristin endresen-maharaj, University of Agder, Norway; Georg Kristoffer Fjalsset, Stiftelsen Arkivet, Norway; Marion Susanne Visotschnig, Paedagogische Hochschule Weingarten, Germany

Session K: 16

Time: 17:00-18:30

Location: UOM_A11

SINGLE PAPER: ASSESSMENT IN MATHEMATICS: NEW METHODS**Chair**

Claudia Reiter, Entrepreneurship Education, Germany

Development and Validation of a Multiplicative Operation Sense Assessment Instrument in 5th Grade

Eva Schultheis, University of Education Freiburg, Germany; Katharina Loibl, University of Education Freiburg, Germany; Timo Leuders, University of Education Freiburg, Germany; Frank Reinhold, University of Education Freiburg, Germany

How PCK sharpens teachers' views when judging mathematical tasks: An eye-tracking study

Kirsten Brunner, Pädagogische Hochschule Freiburg, Germany; Andreas Obersteiner, Technical University of Munich, Germany; Timo Leuders, University of Education Freiburg, Germany

On the Perception and Effectiveness of the Feedback Quality from a Digital Learning Platform

Larissa Altenburger, Leuphana Universität Lüneburg, Germany; Michael Besser, Leuphana Universität Lüneburg, Germany

Formative assessment of early numerical concepts in Brazilian children

Fernanda Rocha de Freitas, Universidade Federal de Minas Gerais, Brazil; Moritz Herzog, University of Wuppertal, Institute for Educational Research, Germany; Antje Ehler, University of Potsdam / University of Johannesburg, Germany; Vitor Geraldi Haase, Universidade Federal de Minas Gerais, Brazil; Annemarie Fritz, Akademie Wort+Zahl, Germany

Session K: 17

Time: 17:00-18:30

Location: UOM_R05

SINGLE PAPER: READING DISABILITIES**Chair**

Mayra Mascareño Lara, University of Groningen, Netherlands

Argumentative text comprehension by students with Reading Disabilities or Low Reading Achievement

Anatoli Kirpouiki, University of Macedonia, Greece; IOANNIS AGALLOTIS, University of Macedonia, Greece

Text Comprehension Improvement in Struggling Readers via Explicit Instruction and a Reading Strategy

Anatoli Kirpouiki, University of Macedonia, Greece; IOANNIS AGALLOTIS, University of Macedonia, Greece

Working memory mediating word problem solving in students with and without reading disabilities

Anastasia Chideridou-Mandari, Aristotle University of Thessaloniki, Greece; Sophia Giazitidou, Dalhousie University, Canada; Susana Padeliadu, Aristotle University of Thessaloniki, Greece

Effectiveness of drama pedagogical reader's theater programs in special education

Jarkko Hautala, Niilo Mäki Institute, Finland; Enni Junttila, Niilo Mäki Institute, Finland; Miia Ronimus, University of Oulu, Finland; Roosa Karhunen, Niilo Mäki Institute, Finland

Session K: 18

Time: 17:00-18:30

Location: UOM_A04

SINGLE PAPER: LINGUISTIC DIVERSITY IN MULTICULTURAL EDUCATION**Chair**

Iwan Wopereis, Open Universiteit, Department of Online Learning and Instruction, Netherlands

Associations of multilingualism with metalinguistic and cultural competence

Thomas Canz, FernUniversität in Hagen, Germany; Kathrin Jonkmann, FernUniversität in Hagen, Germany

Linguistic diversity in Austria: challenges of including Ukrainian students into schools

Flora Woltran, University of Vienna, Austria

Which turn to take? Using translanguaging to promote students' responsiveness in language classrooms

Nienke Smit, Utrecht University, Netherlands; Jornt Holtman, Hanze University of Applied Sciences, Groningen, Netherlands; Marijn Van Dijk, University of Groningen, Netherlands; Wander Lowie, Faculty of Arts, University of Groningen, Netherlands; Marjolijn Verspoor, University of Pannonia, Veszprem, Hungary

Translanguaging stance of preschool teachers in Luxembourg

Gabrijela Aleksic, University of Luxembourg, Luxembourg

Session K: 19

Time: 17:00-18:30

Location: UOM_A07

SINGLE PAPER: SUSTAINABLE DEVELOPMENT IN HIGHER EDUCATION**Chair**

Dieuwer ten Braak, University of Stavanger, Norway

Sustainable anchoring of assessment literacy in Higher Education

Kyle Van den Langenberg, HAN University Nijmegen, Netherlands; Jeroen van der Linden, HAN University of Applied Sciences / Maastricht University, Netherlands; Kitty Meijer, HU University of Applied Sciences Utrecht; Open University of the Netherlands, Netherlands; Liesbeth Baartman, University of Applied Sciences Utrecht, Netherlands; Tamara Schilt-Mol, Hogeschool van Arnhem en Nijmegen, Netherlands

Sustainability of teaching and learning innovations in higher education: a scoping review

Margaret Bearman, Deakin University, Australia; Paige Mahoney, Deakin University, Australia; Helen Partridge, Deakin University, Australia; Harsha Chandir, Deakin University, Australia

The impact of educational roles on student learning in transdisciplinary challenge-based learning

Gemma O'Sullivan, Eindhoven University of Technology (TU/e), Netherlands; Cassandra Tho, Wageningen University and Research Centre, Netherlands; Yvette Baggen, Wageningen University and Research Centre, Netherlands; Despoina Georgiou, Utrecht University, Netherlands; Heleen Pennings, UMC Utrecht, Netherlands; Antoine van den Beemt, Eindhoven University of Technology, Netherlands

Learning to work across boundaries: developing boundary crossing learning trajectories in HE

Judith Gulikers, Wageningen University, Netherlands; Karen Fortuin, Wageningen University, Netherlands; Cassandra Tho, Wageningen University & Research, Netherlands; Carla Oonk, Wageningen University, Netherlands

Session K: 20

Time: 17:00-18:30

Location: AUTH_T202

SINGLE PAPER: INTERVENTIONS TO REDUCE ANXIETY AND IMPROVE WELL-BEING**Chair**

Telle Hailikari, Häme University of Applied Sciences, Finland

A Mindful Educational Intervention Program to Reduce Anxiety and Promote Self-esteem in Adolescence

Victoria Zaroucha, The American College of Thessaloniki (ACT) - Anatolia College, Greece; EVANGELIA GIANNOULI, The American College of Thessaloniki (ACT), Greece

Effect of a physical activity lifestyle intervention on mental wellbeing of VET students.

Mara Kirschner, Open University of the Netherlands, Netherlands; Rianne Golsteijn, Open University of the Netherlands, Netherlands; Roelina Kikkert, Open University of the Netherlands, Netherlands; Hans Savelberg, Maastricht University, Faculty of Health, Medicine and Life Sciences, Netherlands; Renate de Groot, Open University of the Netherlands, Netherlands

Active recovery? - Effects of a physical activity break on student's attention and mood

Christian Müller, Freie Universität Berlin, Germany; Marianne Schuepbach, Freie Universität Berlin, Germany; Jil Wolf, Freie Universität Berlin, Germany; Sven Lindberg, University of Paderborn, Germany

University Students' Descriptions of Behavioral Changes During ACT-based Well-being Course

Kristiina Rähkä, University of Helsinki, Finland; Henna Asikainen, University of Helsinki, Finland; Nina Katajavuori, University of Helsinki, Finland

Session K: 21

Time: 17:00-18:30

Location: UOM_R01

POSTER PRESENTATION: ASSESSMENT METHODS AND EVALUATION**Chair**

Michalis Michaelides, University of Cyprus, Cyprus

How Fair is my Test?: A Ratio Coefficient to Help Represent Consequential Validity

Denis Dumas, University of Georgia, United States; Yixiao Dong, University of Denver, United States; Daniel McNeish, Arizona State University, United States

Does assessors' expertise matter in comparative judgement of argumentative writing?

Tine van Daal, University of Antwerp, Belgium; Marije Lesterhuis, UMC Utrecht, Netherlands

How can feedback support wellbeing? Suggestions from primary and secondary school teachers

Alessia Bevilacqua, University of Verona, Italy

Bidirectional links between educator-child relationship and children's regulation across preschool

Carolina Guedes, Faculty of Psychology and Educational Sciences, University of Porto, Porto, Portugal, Portugal; Joana Cadima, University of Porto, Portugal

Developing Social Skills Universal Screeners for the Greek Elementary School

Lito Eleni Michalopoulou, Aristotle University of Thessaloniki, Greece; Constantinos Vouyoukas, Aristotle University of Thessaloniki, Greece

A cross-cultural examination of rapid guessing behavior in international large-scale assessments

Michalis Michaelides, University of Cyprus, Cyprus; Militsa Ivanova, University of Cyprus, Cyprus

Session K: 22

Time: 17:00-18:30

Location: UOM_GYM

ROUNDTABLE: AT-RISK STUDENTS AND INCLUSIVE EDUCATION**Chair**

Veronika Anselmann, University of Education Schwäbisch Gmünd, Germany

Gender, multisensory books, and LGBTQ-themed books in ECEC and school: A two-pronged scoping review

Radel James Gacumo, University of Stavanger, Norway

Unraveling low-educated adults' motives for learning: a multidimensional perspective

Bea Mertens, University of Antwerp, Belgium; Sven De Maeyer, Antwerp University, Belgium; Vincent Donche, University of Antwerp, Belgium

Linguistic Complexity Analysis of English Bilingual Economics Materials from Germany

Luisa Scherzinger, University of Tübingen, Germany; Taiga Brahm, University of Tübingen, Germany; Detmar Meurers, University of Tübingen, Germany

Comparative analysis of integrated and non-integrated education for prevocational students

Charlotte Arnou, KU Leuven (BE), Belgium; Ingeborg Placklé, Vrije Universiteit Brussel, Belgium; Machteld Vandecandelaere, KU Leuven, Belgium

Session K: 23

Time: 17:00-18:30

Location: UOM_A10

ICT DEMONSTRATION: DO 'EYE' SEE IT ALL? VISUALIZING GAZING PATTERNS IN A VR TO SUPPORT CLASSROOM MANAGEMENT DEVELOPMENT**Do 'eye' see it all? Visualizing gazing patterns in a VR to support classroom management development**

Jolien Mouw, University of Groningen, Faculty of Behavioural and Social Sciences, GION Education/Research, Netherlands; Marjon Fokkens-Bruinsma, University of Groningen, Netherlands

Session K: 24

Time: 17:00-18:30

Location: UOM_A06

ICT DEMONSTRATION: VIRTUAL REALITY AND THEATRE: LEVERAGING THE BEST OF BOTH WORLDS FOR FACULTY PROFESSIONAL DEVELOPMENT**Virtual Reality and Theatre: Leveraging the Best of Both Worlds for Faculty Professional Development**

Jason Chen, College of William and Mary, United States

Session K: 25

Time: 17:00-18:30

Location: UOM_A05

ICT DEMONSTRATION: SUPPORTING TEAMWORK IN TECHNOLOGY-ENHANCED ADULT LEARNING CONTEXTS**Supporting Teamwork in Technology-Enhanced Adult Learning Contexts**

Siem Buseyne, Faculty of Psychology and Educational Sciences, Centre for Instructional Psychology and Technology, KU Leuven Kulak, Belgium; Itec, imec research group at KU Leuven, Imec; CIREL, Centre Interuniversitaire de Recherche en Education de Lille, France, France; Annelies Raes, KU Leuven, Belgium; Robin De Croon, Augment, Department of Computer Science at KU Leuven, Leuven, Belgium, Belgium; Fien Depaepe, KU Leuven, Belgium; Francisco Gutierrez Hernández, Augment, Department of Computer Science at KU Leuven, Leuven, Belgium, Belgium; Kamakshi Rajagopal, Faculty of Psychology and Educational Sciences, Centre for Instructional Psychology and Technology, KU Leuven Kulak, Kortrijk, Belgium; Itec, imec research group at KU Leuven, Imec, Leuven, Belgium, Belgium; Tim Van Lier, VRT Sandbox, Vlaamse Radio- en Televisieomroeporganisatie, Brussels, Belgium, Belgium; Stéphanie Vanneste, Itec, imec research group at KU Leuven, Imec, Leuven, Belgium, Belgium; Katrien Verbert, Augment, Department of Computer Science at KU Leuven, Leuven, Belgium, Belgium; Amelie Vrijdags, Hudson Belgium, Brussels, Belgium, Belgium; Ine Windey, KU Leuven, Belgium

Session L: 1

Time: 08:00-09:30

Location: AUTH_DC3

INVITED SYMPOSIUM: CREATING SPACES FOR CHILDREN TO MEET UNCERTAINTY THROUGH PLAY AND PLAYFUL LEARNING**Chair**

Valeska Grau Cardenas, Pontificia Universidad Católica de Chile, Chile

Discussant

Daniela Jadue Roa, Universidad de O'Higgins, Chile

Making Learning through Play Contextually Relevant and Effective: Case studies in Mexican ECE
Dina Daniela Fajardo Tovar, University of Cambridge, UK, United Kingdom; Sara Baker, University of Cambridge, UK, United Kingdom

Sociodramatic Play as a learning tool: developing mediation skills in ECE through drama techniques

Valeska Grau Cardenas, Pontificia Universidad Católica de Chile, Chile; Fernanda Rufs, Pontificia Universidad Católica de Chile, Chile; Belen Herrera, Pontificia Universidad Católica de Chile, Chile; Javiera Gonzalez, Pontificia Universidad Católica de Chile, Chile; Agustín Ramos, Pontificia Universidad Católica de Chile, Chile; Carolina Castro, Pontificia Universidad Católica de Chile, Chile

Teachers' views on implementing a playful approach to teaching writing skills

Antonia Zachariou, Department of Psychology, Neapolis University Pafos, Cyprus / Faculty of Education, University of Cambridge, UK / Research Centre for Learning, Teaching and Human Development, School of Education, University of Roehampton, UK, Cyprus; Marisol Basilio, University of Cambridge, United Kingdom; David Whitebread, University of Cambridge, United Kingdom

Fostering student engagement and technology comprehension through playful teaching and learning

Hanne Jensen, The LEGO Foundation, Denmark; Lisbet Baad Pedersen, University College South Denmark, Denmark; Stine Rauff Bommersholdt, Ramboll, Denmark

ANNOTATIONS:
SIG 28 INVITED SYMPOSIUM

Session L: 2

Time: 08:00-09:30

Location: AUTH_CH

INVITED SYMPOSIUM: TO SEE THE YET UNSEEN – “CRITICAL ASPECTS” AS A KEY TO DEVELOPING TEACHING AND STUDENTS' LEARNING**Chair**

Ann-Sofie Jägerskog, Stockholm University, Sweden

Discussant

Camilla Björklund, University of Gothenburg, Sweden

Critical aspects as a foundation for a teaching program for early arithmetic skills

Angelika Kullberg, University of Gothenburg, Sweden; Anna-Lena Ekdahl, Jönköping University, Sweden

Identifying critical aspects of picture book reading for kindergarteners as hope in uncertain times

Wai Ming Cheung, The University of Hong Kong, Hong Kong; Serene Chan, University of Hong Kong, Hong Kong

Using critical aspects in social science: Teacher conceptions of growth mindset in primary school

Will Zoppellini, Solent University Southampton, United Kingdom

Focal points for teaching the notion of critical aspects

Malin Tväråna, Uppsala University, Sweden, Sweden; Anja Thorsten, Department of Behavioural Sciences and Learning, Sweden

ANNOTATIONS:
SIG 9 INVITED SYMPOSIUM

Session L: 3

Time: 08:00-09:30

Location: UOM_A04

SYMPOSIUM: EXECUTIVE FUNCTIONS IN SCIENCE AND MATHEMATICS: FROM COGNITIVE NEUROSCIENCE TO APPLIED RESEARCH**Chair**

Reuven Babai, Tel Aviv University, Israel

Organisers

Reuven Babai, Tel Aviv University, Israel; Roland Grabner, University of Graz, Austria

Discussant

Iro Xenidou-Dervou, Loughborough University, United Kingdom

Effect of COVID related school closure on kindergarten's math and executive functioning development

Kerry Lee, The Education University of Hong Kong, Hong Kong; Jin Sun, The Education University of Hong Kong, Hong Kong; Sum Kwing Cheung, The Education University of Hong Kong, Hong Kong; Alfredo Bautista, The Education University of Hong Kong, Hong Kong

Domain-specific and domain-general correlates of the conceptual interference effect in mathematics

Roland Grabner, University of Graz, Austria; Tim Hohensinn, University of Graz, Austria; Katharina Longitsch, University of Graz, Austria; Simon Riedl, University of Graz, Austria; Johannes Woschizka, University of Graz, Austria; Stephan Vogel, University of Graz, Austria

Overcoming misconceptions in scientific domains requires inhibitory control: overview and next steps

Genevieve Allaire-Duquette, Université de Sherbrooke, Canada; Lorie-Marlène Brault Foisy, Université du Québec à Montréal (UQAM), Canada; Patrice Potvin, Université du Québec à Montréal, Canada

Intuitive interference intervention improves junior high school students' achievement in chemistry

Reuven Babai, Tel Aviv University, Israel; Najla Madback, Tel Aviv University, Israel

Session L: 4

Time: 08:00-09:30

Location: AUTH_DC1

SYMPOSIUM: PUT YOUR HANDS ON THE TASK! THE USE OF FINGER POINTING AND TRACING TO SUPPORT MULTIMEDIA LEARNING**Chair**

Björn de Koning, Erasmus University Rotterdam, Netherlands

Organisers

Shirong Zhang, Delft University of Technology, Netherlands; Björn de Koning, Erasmus University Rotterdam, Netherlands

Discussant

Cris Castro, University of Birmingham, United Kingdom

Mouse Pointing to Support Learning From Labeled and Unlabeled Split-Attention Materials

Shirong Zhang, Delft University of Technology, Netherlands; Björn de Koning, Erasmus University Rotterdam, Netherlands; Fred Paas, Erasmus University Rotterdam, Netherlands

To Trace or Not to Trace: Mimicry in Timed Multimedia Lessons with Pointing and Tracing

Stoo Sepp, University of New England, Australia, Australia; Shirley Agostinho, University of Wollongong, Australia; Sharon Tindall-Ford, University of Wollongong, Australia; Fred Paas, Erasmus University Rotterdam, Netherlands

Tracing or Pointing? An eye-tracking study on how learners benefit from using the hands for learning

Roland Bruenken, Saarland University, Germany; Babette Park, University of Education Freiburg, Germany, Germany; Andreas Korbach, Saarland University, Germany; Paul Ginns, The University of Sydney, Australia

Multimedia learning through tracing and pointing: A meta-analysis

Paul Ginns, The University of Sydney, Australia

Session L: 5

Time: 08:00-09:30

Location: UOM_A12

SYMPOSIUM: ANALOGY SUPPORTS INDIVIDUALS IN HARNESSING THE UNCERTAIN**Chair**

Katarzyna Bobrowicz, University of Luxembourg, FLSHASE, Luxembourg

Organiser

Jean-Pierre Thibaut, Université de Bourgogne / Lead - CNRS, France

Discussant

Anke Maria Weber, University of Luxembourg, Luxembourg

Children and Adults Adapt their Search Strategy to Analogy Task Requirement. An Eyetracking Approach

Jean-Pierre Thibaut, Université de Bourgogne / Lead - CNRS, France

Distracted and Misled, Yet Capable of Transfer: Analogical Transfer in 2.5- to 5.5-Year-Olds

Katarzyna Bobrowicz, University of Luxembourg, FLSHASE, Luxembourg; Anke Maria Weber, University of Luxembourg, Luxembourg; Angélica Mendes, University of Luxembourg, Faculty of Language and Literature, Humanities, Arts and Educational Sciences (FLSHASE), Luxembourg; Alicja Jamroga, University of Luxembourg, Faculty of Language and Literature, Humanities, Arts and Educational Sciences (FLSHASE), Luxembourg; Samuel Greiff, University of Luxembourg, Faculty of Language and Literature, Humanities, Arts and Educational Sciences (FLSHASE), Luxembourg

Explaining with Spontaneous Analogies

Yang Gao, Tsinghua University, China; Kexing Que, Tsinghua Laboratory of Brain and Intelligence, Tsinghua University, China; Stella Christie, Department of Psychology, Tsinghua Laboratory of Brain and Intelligence, Tsinghua University, China

Supporting Students' Mathematical and Analogical Thinking while Under Stress

Lindsey Richland, University of California, Irvine, United States; Almaz Mesghina, Northwestern University, United States; Elayne Vollman, Lake Forest College, United States; Bella Lerner, University of California, Irvine, United States

Session L: 6

Time: 08:00-09:30

Location: UOM_CH

SYMPOSIUM: THE PHENOMENON OF SCHOOL ALIENATION UNDER THE MAGNIFYING GLASS**Chairs**

Julia Morinaj, University of Bern, Switzerland; Tina Hascher, University of Bern, Institute of Educational Science, Switzerland

Organisers

Julia Morinaj, University of Bern, Switzerland; Tina Hascher, University of Bern, Institute of Educational Science, Switzerland

Discussant

Barbara Schober, University of Vienna, Austria

Teacher Justice Perception and School Alienation in Swiss Primary and Secondary Schools

Julia Morinaj, University of Bern, Switzerland; Angela Rebecca Aegerter, University of Bern, Switzerland; Tina Hascher, University of Bern, Institute of Educational Science, Switzerland

The risk of school alienation after transition to upper secondary school in Austria

Claudia Schreiner, University of Innsbruck, Austria; Fred Berger, University of Innsbruck, Department of Education, Austria; Livia Jesacher-Rössler, Friedrich-Alexander-University Erlangen-Nürnberg, Germany; Christian Kraler, Teacher Education and School Research, Austria; Wolfgang Hagleitner, University of Innsbruck, Department of Education, Austria; Susanne Roßnagl, University of Innsbruck, Department of Education, Austria

Conditions for and expressions of alienation from learning in secondary school

Alyssa Lauren Grecu, Center for Research on Education and School Development, Germany

CANCELLED: Applying school alienation theory and (...)

Trude Havik, University of Stavanger, Norway

Session L: 7

Time: 08:00-09:30

Location: AUTH_T002

SYMPOSIUM: UNDERSTANDING AND COMBATTING GENDER DIFFERENCES IN STUDENT MOTIVATIONAL FACTORS IN STEM**Chair**

Kaley Lesperance, Technical University of Munich, Germany

Organiser

Kaley Lesperance, Technical University of Munich, Germany

Discussant

Christian Thurn, ETH Zurich, Switzerland

Gender difference in motivation profiles, achievement and STEM aspiration of primary school students

Kezia Olive, University of Helsinki, Finland; Xin Tang, University of Helsinki, Finland; Anni Loukomies, University of Helsinki, Finland; Kalle Juuti, University of Helsinki, Finland; Katariina Salmela-Aro, Helsinki University, Finland

Mathematically talented female and male students: Equally motivated in math and science?

Lena Keller, University of Potsdam, Germany; Franzis Preckel, University of Trier, Germany; Jacquelynne S. Eccles, University of California Irvine, United States; Martin Brunner, University of Potsdam, Germany

Does teacher support lessen gender differences in motivational outcomes in mathematics?

Kaley Lesperance, Technical University of Munich, Germany; Jasmin Decristan, University of Wuppertal; IDEa-Research Center, Germany; Doris Holzberger, Technical University of Munich (TUM) & ZIB (Centre for International Student Assessment), Germany

Promoting children's interests and ability beliefs in engineering and technology at a science museum

Fidelia Law, University of Exeter, United Kingdom; Luke McGuire, University of Exeter, United Kingdom; Manuela Baretto, University of Exeter, United Kingdom; Adam Rutland, University of Exeter, United Kingdom

Session L: 8

Time: 08:00-09:30

Location: UOM_A02

SYMPOSIUM: ASSESSING SCIENTIFIC REASONING AND ARGUMENTATION SKILLS ACROSS DISCIPLINES**Chair**

Marleen Evers, KU LEUVEN, Belgium

Organiser

Marleen Evers, KU LEUVEN, Belgium

Discussant

Javier Fernández, Universidad de Leon, Spain

Impact of teacher's epistemological beliefs on assessing scientific reasoning tasks in psychology

Marleen Evers, KU LEUVEN, Belgium; Jan Elen, KU Leuven, Belgium; Machteld Vandecandelaere, KU Leuven, Belgium

Assessing scientific reasoning skills and research competences in teaching-related fields of studies

Anna Horrer, Institute of Medical Education, LMU Klinikum, Ludwig-Maximilians University Munich, Germany; Tolgonai Erkinova, Department of Psychology, LMU Munich, Germany; Insa Reichow, Educational Technology Lab, German Research Center for Artificial Intelligence, Berlin, Germany; Michael Sailer, LMU Munich, Germany; Maximilian Sailer, University of Passau, Germany; Moritz Heene, Department of Psychology, LMU Munich, Germany; Tamara Van Gog, Utrecht University, Netherlands; Frank Fischer, Ludwig-Maximilians-Universität (LMU), Germany; Martin Fischer, LMU University Hospital, Institute of Medical Education, Germany; Jan Zottmann, Institute of Medical Education, University Hospital, LMU Munich, Germany

Assessing students' causal historical reasoning ability with the use of writing tasks

Gerhard Stoel, Radboud University, Nijmegen, Netherlands; J.P. van Drie, University of Amsterdam, Netherlands

Measuring assessment skills in simulations: Influence of pre-service teacher characteristics

Michael Nickl, Technical University of Munich (TUM), Germany; Daniel Sommerhoff, Leibniz Institute for Science and Mathematics Education, Germany; Elias Codreanu, Technische Universität München, Germany; Stefan Ufer, Ludwig-Maximilians-Universität (LMU), Germany; Tina Seidel, Technische Universität München, Germany

Session L: 9

Time: 08:00-09:30

Location: UOM_A03

SYMPOSIUM: THE SOCIAL NATURE OF EDUCATION: A CLOSER LOOK AT PEER NETWORKS OF STUDENTS AND TEACHERS**Chair**

Julia Eberle, Ruhr-Universität Bochum, Germany

Discussant

Julia Eberle, Ruhr-Universität Bochum, Germany

Examining Academic Diversity in Online Peer Interactions at Scale

Oleksandra Poquet, TUM, Germany; Shane Dawson, University of South Australia, Australia; Vitomir Kovanovic, University of South Australia, Australia; Christopher Brooks, University of Michigan, United States

The role of social capital in secondary school teachers' work socialization process

Thibault Coppe, University of Groningen, Netherlands; Jasperina Brouwer, University of Groningen, Netherlands; Laura Thomas, Ghent University, Belgium

How is the occurrence of collaborative activities related to teachers' collaborative attitudes?

Julie Droissart, Ghent University, Belgium; Melissa Tuytens, Ghent University, Belgium

The relationship between stress and perceived social support among university students

Jasperina Brouwer, University of Groningen, Netherlands; Jannika Haase, Leibniz University Hannover, Germany; Lysann Zander, Leibniz University Hannover, Germany

Session L: 10

Time: 08:00-09:30

Location: AUTH_TE2

SYMPOSIUM: TEACHERS' ASSESSMENTS AND STUDENTS' EDUCATIONAL SUCCESS – INSIGHTS INTO A COMPLEX RELATION**Chair**

Katharina Molitor, Center for Research on Education and School Development, TU Dortmund University, Germany

Organisers

Katharina Molitor, Center for Research on Education and School Development, TU Dortmund University, Germany; Justine Stang-Rabrig, TU Dortmund University, Germany; Nele McElvany, TU Dortmund University, Germany

Discussant

Christine M Davies, University of Auckland, New Zealand

Teachers' judgment accuracy: how is it related to teaching quality and student achievement?

Dimitra Kolovou, St. Gallen University of Teacher Education (PHSG), Switzerland; Jan Hochweber, St. Gallen University of Teacher Education, Switzerland; Anna-Katharina Praetorius, University of Zurich, Switzerland

Accuracy of teachers' perceptions on students' reading fluency.

Maris Juhkam, Tallinn University, Estonia; Mikko Aro, University of Jyväskylä, Finland; Piret Soodla, Tallin University, Estonia

Attending the academic track without teacher recommendation – predictors of educational attainment

Katharina Molitor, Center for Research on Education and School Development, TU Dortmund University, Germany; Justine Stang-Rabrig, TU Dortmund University, Germany; Paul Fabian, CENTER FOR RESEARCH ON EDUCATION AND SCHOOL DEVELOPMENT, Germany; Nele McElvany, TU Dortmund University, Germany

Lens model studies: Revealing teachers' judgments for teacher education

Esther Kaufmann, University of Konstanz, Switzerland

Session L: 11

Time: 08:00-09:30

Location: AUTH_T102

SYMPOSIUM: COMPLEX DYNAMICAL SYSTEMS IN EDUCATIONAL RESEARCH: DIVERSE CONCEPTUAL AND EMPIRICAL APPLICATIONS**Chair**

Dimitrios Stamovlasis, Aristotle University of Thessaloniki, Greece

Organisers

Dimitrios Stamovlasis, Aristotle University of Thessaloniki, Greece; Avi Kaplan, Temple University, United States; Matthijs Koopmans, Mercy College, United States

Discussant

Eleftheria Gonida, Aristotle University of Thessaloniki, Greece

A Complexity Perspective on Researching Causality in Educational Phenomena

Stephen Whitney, University of Missouri/Columbia, United States; Avi Kaplan, Temple University, United States; Joanna Garner, Old Dominion University, Norfolk, United States

Complexity in Student Learning: An Example from Sign Networks in Learning

Richard Taylor, University of Oxford, United Kingdom; Judith Hillier, University of Oxford, United Kingdom; Ann Childs, University of Oxford, United Kingdom

A Complex Dynamic Systems Perspective on Identity, Motivation, and Learning

Avi Kaplan, Temple University, United States; Joanna Garner, Old Dominion University, United States

Investigating Educational Phenomena with Catastrophe Theory

Dimitrios Stamovlasis, Aristotle University of Thessaloniki, Greece

Session L: 12

Time: 08:00-09:30

Location: AUTH_DC2

SYMPOSIUM: CAUSES AND EFFECTS OF MATHEMATICS ANXIETY**Chair**

Florence Gabriel, University of South Australia, Australia

Discussant

Thomas Hunt, University of Derby, United Kingdom

Math anxiety and math teaching anxiety: Are they independent and do they relate to pupils' outcomes?

Kinga Morsanyi, Queen's University Belfast, United Kingdom; Andy Ash, Loughborough University, United Kingdom

The influence of student and teacher gender on students' maths anxiety : A whole school study

Rebecca Marrone, University of South Australia, Australia; Fernando Marmolejo-Ramos, University of South Australia, Australia; Florence Gabriel, University of South Australia, Australia

Mathematics anxiety and positive attitudes towards mathematics are not mutually exclusive

Krzysztof Cipora, Loughborough University, United Kingdom; Serena Rossi, Loughborough University, United Kingdom; Hannah Connolly, University of York, United Kingdom; Alexander von Bergen, Swiss Federal Institute of Technology ETH Zurich, Switzerland; Vera Baumgartner, ETH Zurich, Switzerland; Manu Kapur, ETH Zurich, Switzerland; Venera Gashaj, University of Bern, Switzerland

Math self-efficacy, and not Math anxiety, steers students away from STEM

Flávia H. Santos, University College Dublin, Ireland; Mariuche Gomides, University College Dublin, Ireland; Claire Elliott, University College Dublin, Ireland; Sara Caviola, University of Padova, Italy; Krzysztof Cipora, Loughborough University, United Kingdom

Session L: 13

Time: 08:00-09:30

Location: UOM_A13

SINGLE PAPER: LEARNING TO READ AND WRITE**Chair**

Arniikka Kuusisto, University of Helsinki, Finland

Reading and writing: The role of home literacy and emergent literacy skills

GIULIA VETTORI, University of Florence, Italy; Oriana Incognito, University of Florence, Italy; Lucia Bigozzi, University of Florence, Italy

Learning to read: From an umbrella review of reading research to an educator's practice guide

Jordi Casteleyn, Antwerp University, Belgium; Mathea Simons, University of Antwerp, Belgium; Tom Smits, Antwerp University, Belgium

The influence of writing medium and gesture modality on the development of early literacy skills

Theresa Kalchhauser, Faculdade de Psicologia e de Ciências da Educação da Universidade do Porto, Portugal; Mariana Silva, Faculdade de Psicologia e de Ciências da Educação da Universidade do Porto, Portugal; Rui Alexandre Alves, University of Porto, Portugal

Dot-to-dot Practice Enhances Children's Handwriting:

Esther Adi-Japha, Bar-Ilan University, Israel; Rafat Ghanamah, Oranim Academic College of Education+ The University of Haifa, Israel; Hazar Eghbaria-Ghanamah, The University of Haifa, Israel; Avi Karni, Haifa University, Israel

Session L: 14

Time: 08:00-09:30

Location: UOM_CR

SINGLE PAPER: FOSTERING MOTIVATION THROUGH INSTRUCTIONAL DESIGN**Chair**

Bjorn Wansink, Utrecht University, Netherlands

Automated, Negative Performance Feedback Harms Students' Emotions (Less when it is Elaborated)

Livia Kuklick, IPN - Leibniz Institute for Science and Mathematics Education, Germany; Dr. Marlit Annalena Lindner, IPN - Leibniz Institute for Science and Mathematics Education, Germany

The Relationships between Pedagogy, Motivation, and Perception of the Learning Environment

Irit Sasson, Tel-Hai College, Israel; NETA GAVISH, Tel-Hai College and Shamir Research Institute, Israel; Joy Benatov, University of Haifa, Faculty of Education, Israel

Making lectures more interesting? - Effects of a Utility Value Intervention

Nathalie John, DIPF | Leibniz Institute for Research and Information in Education, Germany; Franziska Baier, Goethe-Universität Frankfurt, Germany; Sebastian Korinth, DIPF | Leibniz Institute for Research and Information in Education, Germany; Mareike Kunter, DIPF | Leibniz Institute for Research and Information in Education, Germany

Multimedia Learning with Cartoons: A Test of the Emotional Design Hypothesis

Fangzheng Zhao, University of California, Santa Barbara, United States; Richard Mayer, University of California, Santa Barbara, United States

Session L: 15

Time: 08:00-09:30

Location: UOM_R05

SINGLE PAPER: FEEDBACK IN TECHNOLOGY-ENHANCED LEARNING**Chair**

Sarah Crafter, The Open University, United Kingdom

Effects of Computer-Based KCR and AUC Feedback on Affective-Motivational Outcomes

Ute Mertens, IPN - Leibniz Institute for Science and Mathematics Education, Germany; Marlit Annalena Lindner, IPN - Leibniz Institute for Science and Mathematics Education, Germany

Effects of feedback and cooperative learning on knowledge acquisition in online flipped classrooms

Ruben Schlag, University of Passau, Germany; Karsten Stegmann, University of Passau, Germany; Maximilian Sailer, University of Passau, Germany

Friends or Feedback?—Computer Science Students' Goals' and Their Intention to Use a Feedback-Tool

Tugce Özbek, Augsburg University, Germany; Tobias Mömke, Augsburg University, Germany; Aida Roshany, Augsburg University, Germany; Ingo Kollar, Augsburg University, Germany

Learning analytics supporting mathematical thinking

Sanna Oinas, University of Helsinki, Finland; Mikko Asikainen, The University of Helsinki, Finland; Mari-Pauliina Vainikainen, Tampere University, Finland

Session L: 16

Time: 08:00-09:30

Location: UOM_R09

SINGLE PAPER: USING VIDEO TO SUPPORT THE SOCIAL ASPECTS OF LEARNING**Chair**

Esther Brunner, Thurgau University of Teacher Education, Kreuzlingen (PHTG), Switzerland

Students' acceptance and confidence in the use of video pedagogy in higher education

Anja Garone, University College Leuven Limburg, Belgium; Greet Fastré, University College Leuven Limburg, Belgium; Kiara Billiau, University College Leuven Limburg, Belgium; Steven Verjans, University College Leuven Limburg, Belgium; An Verburgh, University College Leuven Limburg, Belgium

The Contribution of Narrative Video production to SEL in Education.

Evanna Ratner, Gordon Academic College, Israel

Using Video to Support Student-Teachers' Classroom Management During Early Field Placement

George Olympiou, University of Cyprus, Cyprus

A review of interactive use of video for learning and assessment in higher education

Magnus Hontvedt, University of Southeastern Norway, Norway; Charlotte Beal, University of South-Eastern Norway, Norway; Thomas de Lange, University of South-Eastern Norway, Norway; Marit Skarbø Solem, Faculty of Humanities, Sports and Educational Science, Norway; Tonje Stenseth, University of South-Eastern Norway, Norway

Session L: 17

Time: 08:00-09:30

Location: UOM_R08

SINGLE PAPER: INSTRUCTIONAL QUALITY: TEACHER- AND TEACHING-RELATED FACTORS**Chair**

Carolina Rodríguez Llorente, Universidad de La Coruña, Spain

The role of teacher characteristics for instructional quality: A meta-analysis

Nicoletta Bürger, University of Hildesheim, Germany; Katharina Engelmann, Universität Hildesheim, Germany; Laura Schultze, Universität Hildesheim, Germany; Gabriele Prinz, University of Hildesheim, Germany; Marvin Scott Schlamelcher, University of Hildesheim, Germany; Jürgen Menthe, University of Hildesheim, Germany; Barbara Schmidt-Thieme, University of Hildesheim, Germany; Christof Wecker, Universität Hildesheim, Germany

Teachers' attributes for academic optimism: understanding its development for equity and excellence

Ruud Lelieur, University of Antwerp, Belgium; Ruben Vanrussett, University of Antwerp, Belgium; Noel Clycq, University of Antwerp, Belgium; Jan Vanhoof, University of Antwerp, Belgium

Teacher Training for Whole Child Outcomes: Evidence of the impact of Teach For Nigeria

Kata Mihaly, RAND Corporation, United States; Jonathan Schweig, RAND Corporation, United States; Elaine Wang, RAND Corporation, United States; Sabrina Lee, RAND Corporation, United States

Adaptive Teaching: What Research on Learning and Instruction Can Learn from Schools

Hanna Dumont, University of Potsdam, Germany; Jasmin Decristan, University of Wuppertal; IDeA-Research Center, Germany; Benjamin Fauth, Institute for Educational Analysis, Germany; Nora Fröhlich, Institute for Educational Analysis, Germany; Ann-Kathrin Jaekel, University of Tuebingen, Germany; Simon Ohl, University of Potsdam, Germany; Enkeleta Shtërbani, Bergische Universität Wuppertal, Germany

Session L: 18

Time: 08:00-09:30

Location: UOM_A07

SINGLE PAPER: PERSONALITY, MOTIVATIONAL AND EMOTIONAL ASPECTS IN TEACHING AND MENTORING**Chair**

Lito Eleni Michalopoulou, Aristotle University of Thessaloniki, Greece

What do pre-service teachers' personality scores measure? A longitudinal study on college admission

Georg Krammer, University College of Teacher Education Styria, Austria; Julie Aitken Schermer, The University of Western Ontario, Canada; Corinna Koschmieder, University College of Teacher Education Styria, Austria; Richard Goffin, The University of Western Ontario, Canada; Nhung Hendy, Department of Management, Towson University, United States; Michael Biderman, University of Tennessee at Chattanooga, United States

Teacher emotions and their antecedents in the team-taught classroom from the teachers' perspective

Franziska Muehlbacher, University of Salzburg, Austria; Gerda Hagenauer, University of Salzburg, Austria; Melanie M. Keller, IPN Leibniz Institute for Science Education, Germany

Associations between mentor teachers' motivation and their behavior and enthusiasm in mentoring

Clara Kuhn, University of Salzburg, Austria; Gerda Hagenauer, University of Salzburg, Austria; Alexander Groeschner, Friedrich Schiller University Jena, Germany; Andreas Bach, University of Salzburg, Austria

Beginning teachers' basic psychological needs: a multi-informant to optimize initial guidance

Silke Hellebaut, University of Ghent, Belgium; Katrien De Cocker, Ghent University, Belgium; Leen Haerens, Ghent University, Belgium

Session L: 19

Time: 08:00-09:30

Location: UOM_A10

SINGLE PAPER: TECHNOLOGY USE FOR LEARNING, THINKING AND ASSESSMENT PURPOSES**Chair**

Maria A. Flores, University of Minho, Portugal

BYOD and technology use in class: Does it really have an impact?

Maria-Luisa Schmitz, University of Zurich, Institute of Education, Switzerland; Chiara Antonietti, University of Zurich, Institute of Education, Switzerland; Tessa Consoli, University of Zurich, Institute of Education, Switzerland; Alberto Cattaneo, Swiss Federal University for Vocational Education and Training, Switzerland; Philipp Gonon, University of Zurich, Institute of Education, Switzerland; Dominik Petko, University of Zurich, Switzerland

Middle school Students Design Chemical Reactions through Computational Modeling using MMM Platform

Sharona T Levy, University of Haifa, Israel; Asnat R. Zohar, University of Haifa, Faculty of Education, Israel

Personalized Learning with Digital Technologies – A mixed-methods study in secondary schools

Regina Schmid, Schwyz University of Teacher Education, Switzerland; Christine Pauli, University of Fribourg, Switzerland; Rita Stebler, University of Zurich (retired), Switzerland; Dominik Petko, University of Zurich, Switzerland

How do test-takers rate their effort? A comparative analysis of self-report and log file data

Róbert Csányi, SZTE, Hungary; Gyöngyvér Molnár, University of Szeged, MTA-SZTE Digital Learning Technologies Research Group, Hungary

Session L: 20

Time: 08:00-09:30

Location: UOM_A08

SINGLE PAPER: MOTIVATIONAL BELIEFS AND STRATEGIES IN HIGHER EDUCATION**Chair**

Armin Jentsch, University of Oslo, Norway

Does frustration of students' needs matter in relation to burnout and engagement?

Piermarco Consiglio, University of Groningen, Netherlands; Joke Fleer, University of Groningen, Netherlands; Ellen Jansen, University of Groningen, Netherlands; Marjon Fokkens-Bruinsma, University of Groningen, Netherlands

Developing and validating a measure for the perceived civic and vocational relevance of studies

Jonas Breetzke, University of Hamburg, Germany; Derya Özbacgi, University of Hamburg, Germany; Carla Bohndick, University of Hamburg, Germany

Longitudinal associations between intrinsic study motivation and achievement at university

Laura Aglaia Sophia Messerer, University of Mannheim, Germany; Ronny Scherer, University of Oslo, Norway; Stefan Janke, University of Mannheim, Germany

(Help me to) motivate me: Promoting motivation and motivational regulation in higher education

Sophie von der Mülbe, University of Augsburg, Germany; Markus Dresel, University of Augsburg, Germany

ANNOTATIONS:

PLEASE NOTE THAT THIS SESSION ROOM HAS CHANGED FROM AUTH_TE1 TO UOM_A08.

Session L: 21

Time: 08:00-09:30

Location: AUTH_T202

SINGLE PAPER: TEACHER AGENCY**Chair**

Tjitske de Groot, Utrecht University, Netherlands

Early career teachers' professional agency and associations with leadership vision and school size

Liyuan E, University of Helsinki, Finland; Auli Toom, University of Helsinki, Finland; Jenni Sullanmaa, Tampere University, Finland; Janne Pietarinen, University of Eastern Finland, Finland; Tiina Soini-Ikonen, Tampere University, Finland; Kirsi Pyhälä, University of Helsinki, Finland

Supporting Teacher Agency During a Collaborative Inquiry-based In-service Teacher Education Course

Äli Leijen, University of Tartu, Estonia; Margus Pedaste, University of Tartu, Estonia; Liina Lepp, University of Tartu, Estonia

Unpacking Relationships Among Teacher Agency, Attribution, and Resilience in an Age of Neoliberalism

Ji Hong, University of Arizona, United States; Dionne Cross Francis, University of North Carolina at Chapel Hill, United States; Kelly Chong, Round Rock Children's Therapy Center, United States; Laura Lewis, University of Oklahoma, United States; Alex Parsons, Salt Lake City School District, United States; Crystal Recknagel, J.J. Pearce High School, United States; Qian Wang, University of Oklahoma, United States

A questionnaire for assessing teacher agency across pre-service and in-service context

Äli Leijen, University of Tartu, Estonia; Margus Pedaste, University of Tartu, Estonia; Aleksander Baucaal, University of Belgrade, Serbia

Session L: 22

Time: 08:00-09:30

Location: UOM_A11

SINGLE PAPER: MIGRANT AND REFUGEE STUDENTS: ACHIEVEMENT, SOCIAL AND MOTIVATIONAL ASPECTS**Chair**

Denis Dumas, University of Georgia, United States

School Diversity Models and Relations with Achievement: Does the Domain Matter?

Roy Konings, KU Leuven (BE), Belgium; Orhan Agirdag, KU Leuven / University of Amsterdam, Belgium; Jozefien De Leersnyder, KU Leuven / University of Amsterdam, Belgium

Sense of belonging of children with and without a migration background in Austria

Saranda Shabanhaxhaj, University of Graz, Institute of Education Research and Teacher Education, Austria; Heike Wendt, University of Graz, Austria

Emotion Differentiation Ability & School Belonging among Flemish Multilingual and Monolingual Pupils

Graziela N.M. Dekeyser, KU Leuven (BE), Belgium; Orhan Agirdag, KU Leuven / University of Amsterdam, Belgium; Jozefien De Leersnyder, KU Leuven (BE), Belgium

Immigrant-Origin Youths' Aspirations – a Cross-National Analysis Comparing the U.S. and Switzerland

Anita Caduff, University of California, San Diego, United States

Session L: 23

Time: 08:00-09:30

Location: UOM_GYM

ROUNDTABLE: LEARNING AND INSTRUCTIONAL TECHNOLOGIES**Chair**

Daniel Deimel, University of Duisburg-Essen, Germany

Study-Buddy: An educational chatbot for study advice on effective learning strategies

Tim Debets, Open Universiteit, Department of Online Learning and Instruction, Netherlands; Martijn van Otterlo, Open Universiteit, Netherlands; Tanja Vos, Open Universiteit, Netherlands; Desirée Joosten-ten Brinke, Open University of the Netherlands, Netherlands; Gino Camp, Open Universiteit, Department of Online Learning and Instruction, Netherlands

Evaluating Elementary Student Experiences from Digital Safety Immersion Summer Camp

Florence Martin, North Carolina State University, United States; Doreen Mushi, North Carolina State University, United States; Julie Bacak, University of North Carolina Charlotte, United States; Weichao Wang, University of North Carolina Charlotte, United States

EU-FairPlay: Educational Equity and Digital Game-Based Learning. Current state of research.

Zhitian Zhang, Hector Research Institute of Education Sciences and Psychology, University of Tübingen, Germany; Markus Suren, TU Chemnitz, Germany; Helge Fischer, TU Dresden, Germany; Katerina Tsarava, University of Tübingen, Germany; Martina Seemann, TU Chemnitz, Germany; Richard Joos, TU Dresden, Germany

Identifying teachers' needs whilst working with a teacher dashboard: an explorative study

Manel van Kessel, Leiden University, Netherlands; Nadira Saab, Leiden University, Netherlands; Inge Molenaar, Radboud Universiteit Nijmegen, Netherlands

Session L: 24

Time: 08:00-09:30

Location: UOM_A05

ICT DEMONSTRATION: HYBRID HUMAN-AI DRIVEN PERSONALIZED EDUCATION TOOL**Hybrid Human-AI Driven Personalized Education Tool**

Mohammadreza Molavi Hajiagha, Technical Information Library (TIB), Germany; Mohammadreza Tavakoli, German National Library for Science and Technology (TIB), Germany; Gábor Kismihók, Leibniz Information Centre for Science and Technology, Germany

Session L: 25

Time: 08:00-09:30

Location: UOM_A06

ICT DEMONSTRATION: AN R-BASED APPLICATION TO CODE TEXTS SEMI-AUTOMATICALLY**An R-Based Application to Code Texts Semi-Automatically**

Nico Andersen, DIPF | Leibniz Institute for Research and Information in Education, Germany; Fabian Zehner, German Institute for International Educational Research (DIPF), Centre for International Student Assessment (ZIB), Germany

Session L: 26

Time: 08:00-09:30

Location: UOM_A09

ICT DEMONSTRATION: MEET NEARPOD: A GAME-CHANGING TOOL FOR STUDENT ENGAGEMENT**Meet Nearpod: A game-changing tool for student engagement**

Nikki Aharonian, Oranim College of Education, Israel

Keynotes: 1

Time: 09:45-11:15

Location: AUTH_CH

KEYNOTE: ON THE NECESSITY OF MAJOR AND MINOR SYNÄVÄNDOR IN THE EDUCATIONAL SCIENCES**Chair**

Roger Saljo, University of Gothenburg, Sweden

On the necessity of major and minor synväändor in the educational sciences

Sangeeta Bagga-Gupta, Jönköping University, Sweden

Keynotes: 2

Time: 09:45-11:15

Location: HELEXPO_CC

KEYNOTE: DEALING WITH DISAGREEMENT: COMING TO TERMS WITH THE SOCIAL NATURE OF KNOWLEDGE**Chair**

Raija Hämäläinen, University of Jyväskylä, Finland

Dealing with Disagreement: Coming to Terms with the Social Nature of Knowledge

Sarit Barzilai, University of Haifa, Israel; Eva Thomm, University of Erfurt, Germany

Keynotes: 3

Time: 09:45-11:15

Location: UOM_CH

KEYNOTE: CONSCIOUSNESS AS A COMPASS FOR NAVIGATING LEARNING IN UNCERTAIN TIMES**Chair**

Maria Platsidou, University of Macedonia, Greece

Consciousness as a compass for navigating learning in uncertain times

NIKOLAOS MAKRIS, Democritus University of Thrace, Greece

Session M: 1

Time: 12:00-13:30

Location: UOM_CH

INVITED SYMPOSIUM: DIFFERENT PERSPECTIVES ON MOMENTARY SITUATED ENGAGEMENT IN CLASSROOM CONTEXTS**Chair**

Raven Rinas, Augsburg University, Germany

OrganisersRicardo Böheim, Technical University of Munich, Germany;
Jennifer Symonds, University College Dublin, Ireland**Discussant**Anastasia/Natassa Kyriakopoulou, National & Kapodistrian
University of Athens, Greece**Optimal Learning Moments in Finnish and US Science Classrooms: A Network Analysis****Approach**

Xin Tang, Shanghai Jiao Tong University, China; I-Chien Chen, Michigan State University, United States; Jari Lavonen, University of Helsinki, Finland; Barbara Schneider, Michigan State University, United States; Joseph Krajcik, Michigan State University, United States; Katariina Salmela-Aro, Helsinki University, Finland

Exploring Collaboration and Executive Functions in Open-Ended Problem-Solving in Mathematics

K. Ann Renninger, Swarthmore College, United States; Ricardo Böheim, Technical University of Munich, Germany; Maria Consuelo De Dios, Swarthmore College, United States; Maeve R. Hogan, Swarthmore College, United States; Moe Htet Kyaw, Swarthmore College, United States; Ana G. Michels, Swarthmore College, United States; Marina Nakayama, Swarthmore College, United States; Pablo E. Torres, University of Cambridge, United Kingdom; Helena Werneck de Souza Dias, Swarthmore College, United States

Class Size, Momentary Behavioural Engagement, and Low Income Schools: An Irish National Study

Jennifer Symonds, University College Dublin, Ireland; Aisling Davies, University College Dublin, Ireland; Seaneen Sloan, University College Dublin, Ireland; Dymna Devine, University College Dublin, Ireland; Gabriella Martinez Sainz, University College Dublin, Ireland; Ricardo Böheim, Technical University of Munich, Germany; Matt Somerville, IOE, UCL's Faculty of Education and Society, United Kingdom; Edward Baines, UCL Institute of Education, London, United Kingdom; Xin Tang, Shanghai Jiao Tong University, China; Niamh Oeri, University of Bern, Switzerland; Raven Rinas, Augsburg University, Germany; Florian Bühler, University of Bern, Switzerland; Gertraud Benke, Klagenfurt University, Austria

Peer Relations, Engagement and Achievement in Primary School Classrooms

Edward Baines, UCL Institute of Education, London, United Kingdom; Matt Somerville, IOE, UCL's Faculty of Education and Society, United Kingdom; Ricardo Böheim, Technical University of Munich, Germany; Yue Zhao, University College London, United Kingdom; Jennifer Symonds, University College Dublin, Ireland; Aisling Davies, University College Dublin, Ireland; Peter Blatchford, UCL Institute of Education, United Kingdom

ANNOTATIONS:
EFG INVITED SYMPOSIUM

Session M: 2

Time: 12:00-13:30

Location: AUTH_CH

INVITED SYMPOSIUM: SOCIAL NETWORK TOOLS: ADVANCED METHODS TO CONTEXTUALIZE LEARNING RESEARCH**Chair**

Laura Thomas, Ghent University, Belgium

Organiser

Jasperina Brouwer, University of Groningen, Netherlands

Discussant

Hanke Korpershoek, University of Groningen, Netherlands

The social network of teachers guiding newly arrived migrant students: A qualitative study

Laura Thomas, Ghent University, Belgium; Britt Adams, Ghent University, Belgium; Melissa Tuytens, University of Ghent, Belgium; Ruben Vanderlinde, Ghent University, Belgium

The development of peer support networks, self-efficacy, and drop-out intentions

Julia Eberle, Ruhr-Universität Bochum, Germany; Jasperina Brouwer, University of Groningen, Netherlands

Analysing teacher agency within school social structure: New uses of visual methods

Natasa Pantic, University of Edinburgh, United Kingdom; Marc Sarazin, University of Edinburgh, United Kingdom; Thibault Coppe, University of Groningen, Netherlands

A social network perspective on workplace learning and social capital formation in a medical team

Jasperina Brouwer, University of Groningen, Netherlands; Bram Jacobs, University of Groningen, Netherlands

ANNOTATIONS:
SIG 17 INVITED SYMPOSIUM

Session M: 3

Time: 12:00-13:30

Location: HELEXPO_CC

INVITED SYMPOSIUM: BUILDING A BETTER UNDERSTANDING OF TEACHERS' WELL-BEING**Chairs**

Robert Klassen, University of York, United Kingdom; Sophie Thompson-Lee, University of York, United Kingdom

Discussant

Courtney Bell, University of Wisconsin, United States

The long-term trajectories of teachers' well-being: Results from a 10 year longitudinal study

Uta Dr. Klusmann, Leibniz Institute for Science and Mathematics Education (IPN), Germany; Thamar Voss, University of Freiburg, Germany; Dirk Richter, University of Potsdam, Germany; Mareike Kunter, German Institute for International Educational Research (DIPF), Germany

Using a Nationally Representative Survey to Understand Post-Pandemic U.S. Teacher Well-Being

V. Darleen Opfer, RAND Corporation, United States; Elizabeth Steiner, RAND, United States

Revisiting Effects of Teacher Characteristics on Stress: A Virtual Reality Study

Lisa Bardach, University of Tübingen, Germany; Yizhen Huang, University of Potsdam, Germany; Eric Richter, University of Potsdam, Germany; Robert Klassen, University of York, United Kingdom; Thilo Kleickmann, Kiel University, Germany; Dirk Richter, University of Potsdam, Germany

Under Pressure: The Role of the Principal-Teacher Relationship in Teachers' Well-Being

Mathias Dehne, Friedrich Schiller University Jena, Germany; Debora Roorda, University of Amsterdam, Netherlands; Helma Koomen, Research Institute of Child Development and Education, Netherlands; Marjolein Zee, Erasmus University Rotterdam, Netherlands

ANNOTATIONS:
E-CER INVITED SYMPOSIUM

Session M: 4

Time: 12:00-13:30

Location: AUTH_DC2

SYMPOSIUM: PERSPECTIVES ON EMERGING TEACHER LEARNING RESEARCH**Chair**

Susan Yoon, University of Pennsylvania, United States

Discussant

Susan Goldman, University of Illinois at Chicago, United States

Engaging teachers in dialogic discourse: PD effectiveness and teachers' individual learning

Ricardo Böheim, Technical University of Munich, Germany; Ann-Kathrin Schindler, University of Augsburg, Germany; Tina Seidel, Technische Universität München, Germany

The Role of Data Analytics Tools for Teachers Learning to Implement Student Collaboration

Nikol Rummel, Ruhr University Bochum, Germany; Anouschka van Leeuwen, Utrecht University, Netherlands

Investigating co-design as a professional development model to support teacher efficacy

Eleni Kyza, Cyprus University of Technology, Cyprus; Andria Agesilaou, Cyprus University of Technology, Cyprus; Yiannis Georgiou, Cyprus University of Technology, Cyprus; Andreas Hadjichambis, Ministry of Education, Culture, Sports and Youth, Cyprus

Teachers' Adaptive Expertise and Impacts on Student Experiences During STEM-Integrated Learning

Susan Yoon, University of Pennsylvania, United States; Amanda Cottone, University of Pennsylvania, United States; Joeeun Shim, University of Pennsylvania, United States; Chad Evans, University of Pennsylvania, United States; Kate Miller, University of Pennsylvania, United States; Noora Noushad, University of Pennsylvania, United States; Blanca Himes, University of Pennsylvania, United States

Session M: 5

Time: 12:00-13:30

Location: AUTH_T002

SYMPOSIUM: ENJOYING COGNITIVE EFFORT: OUTCOMES AND DEVELOPMENT OF NEED FOR COGNITION IN YOUTH**Chair**

Jeroen Lavrijsen, KU Leuven, Belgium

Discussant

Astrid Poorthuis, Utrecht University, Netherlands

Need for Cognition Predicts Academic Achievement Beyond Cognitive Ability, Openness and Persistence

Jeroen Lavrijsen, KU Leuven, Belgium; Franzis Preckel, University of Trier, Germany; Karine Verschueren, KU Leuven, Belgium

Need for Cognition Predicts Changes in Academic Interest but not the Other Way Round

Franzis Preckel, University of Trier, Germany; Vsevolod Scherrer, Universität Trier, Germany

Need for Cognition as a Resource for Coping with Everyday Challenges in School

Johanna Bruchmann, Institute of Psychology, Faculty of Behavioural and Social Sciences, Chemnitz University of Technology, Germany; Alexander Strobel, Technische Universität Dresden, Germany; Antonia Martin, TU Chemnitz, Germany; Laura May Legler, TU Dresden, Germany; Anja Strobel, TU Chemnitz, Germany

The Development of Need for Cognition: Longitudinal Differences across Secondary School Tracks

Franzis Preckel, University of Trier, Germany; Joanne Colling, University of Luxembourg, Luxembourg; Rachel Wollschläger, University of Luxembourg, Luxembourg; Ulrich Keller, University of Luxembourg, Luxembourg; Antoine Fischbach, Luxembourg Centre for Educational Testing, Luxembourg

Session M: 6

Time: 12:00-13:30

Location: UOM_CR

SYMPOSIUM: HOMEWORK: FAMILY INVOLVEMENT AND TEACHERS' ROLE**Chair**

Susana Rodríguez, University of A Coruña, Spain

Organisers

Lisa Benckwitz, IPN Leibniz Institute for Science Education, Germany; Konstantina Falanga, Aristotle University of Thessaloniki, Greece; Tania Vieites, Universidad de La Coruña, Spain; Jianzhong Xu, Mississippi State University, United States

Discussant

Carolina Rodríguez Llorente, Universidad de La Coruña, Spain

Homework assistance provided by private tutors and students' outcomes – Does students' age matter?

Lisa Benckwitz, IPN Leibniz Institute for Science Education, Germany; Katharina Kohl, Leibniz Institute for Science and Mathematics Education, Germany; Natalia Suárez-Fernández, University of Oviedo, Spain; José Carlos Núñez Pérez, University of Oviedo, Spain; Karin Guill, Leibniz Institute for Science and Mathematics Education, Germany

Parent homework involvement, student motivation and performance: A person-centered longitudinal study

Konstantina Falanga, Aristotle University of Thessaloniki, Greece; Eleftheria Gonida, Aristotle University of Thessaloniki, Greece; Dimitrios Stamovlasis, Aristotle University of Thessaloniki, Greece

MITCA: Homework Implementation Method improving student self-regulation and school engagement

Tania Vieites, Universidad de La Coruña, Spain; Fátima María Díaz Freire, University of A Coruña, Spain; Lucía Díaz Pita, University of A Coruña, Spain; Susana Rodríguez, University of A Coruña, Spain; Antonio Valle Arias, University of A Coruña, Spain

Student-Perceived Parental Help with Homework: Identifying Student Profiles

Carolina Rodríguez Llorente, Universidad de La Coruña, Spain; Ruiping Yuan, University of Mississippi, United States; Jianzhong Xu, Mississippi State University, United States

Session M: 7

Time: 12:00-13:30

Location: UOM_A02

SYMPOSIUM: UNDERSTANDING STUDENTS' PERSPECTIVES ON LEARNING AND INSTRUCTION: A QUALITATIVE APPROACH**Chair**

Louise David, Maastricht University, Netherlands

Organisers

Felicitas Biber, Maastricht University, Netherlands; Marloes Broeren, Avans Hogeschool / Avans University of Applied Sciences, Netherlands; Morane Stevens, KU Leuven - University of Leuven, Belgium

Discussant

Matthias Nückles, University of Freiburg, Germany

Imagining education: An exploration of students' prototypical ideas of instruction

Morane Stevens, KU Leuven - University of Leuven, Belgium; Jan Elen, KU Leuven, Belgium

How students apply learning strategies: A qualitative comparison between different strategy users

Gabriel Taban, Fontys University of Applied Sciences, Netherlands; Felicitas Biber, Maastricht University, Netherlands; Anique de Bruin, Maastricht University, Netherlands

Students' Habitual Use of Effective Learning Strategies

Louise David, Maastricht University, Netherlands; Felicitas Biber, Maastricht University, Netherlands; Rik Crutzen, Maastricht University, Netherlands; Anique de Bruin, Maastricht University, Netherlands

What factors influence higher education students' motivation to use cognitive learning strategies

Marloes Broeren, Avans Hogeschool / Avans University of Applied Sciences, Netherlands; Peter Verkoeijen, Erasmus University Rotterdam, Netherlands; Guus Smeets, Erasmus University Rotterdam, Netherlands; Arends Lidia, Erasmus University Rotterdam, Netherlands

Session M: 8

Time: 12:00-13:30

Location: UOM_A03

SYMPOSIUM: PHYSICAL ACTIVITY AND EXECUTIVE FUNCTIONS: FROM KINDERGARTEN TO SECONDARY SCHOOL**Chair**

Kristin Kolloff, University of Bern, Switzerland

Organiser

Christina Heemskerk, University of Bern, Switzerland

Discussant

Ulrich Dettweiler, University of Stavanger, Norway

Reciprocal associations between Physical Activity, Motor Skills and Executive Functions

Anssi Vanhala, University of Helsinki, Finland; Anna Widlund, Åbo Akademi University, Finland; Johan Korhonen, Åbo Akademi University, Finland; Pirjo Aunio, University of Helsinki, Finland

Primary school children's physical activity and executive functioning: An intraindividual study

Lars-Erik Malmberg, University of Oxford, United Kingdom; Christina Heemskerk, University of Bern, Switzerland; Henry Lo, Oxford University, United Kingdom; Patrick Esser, Oxford Brookes University, United Kingdom; Helen Dawes, Oxford Brookes University, United Kingdom; Stefan Kodzhabashev, University of Bern, Switzerland; Claudia Roebbers, University of Bern, Switzerland

Movement-based learning support in the classroom

Jennifer Liersch, University of Duisburg-Essen, Germany; Karin Eckenbach, University of Duisburg-Essen, Germany; Michael Pfitzner, University of Duisburg-Essen, Germany

Physical activity, behaviour, and executive functions in primary school

Christina Heemskerk, University of Bern, Switzerland; Lars-Erik Malmberg, University of Oxford, United Kingdom; Claudia Roebbers, University of Bern, Switzerland

Session M: 9

Time: 12:00-13:30

Location: AUTH_DC1

SYMPOSIUM: PAYING ATTENTION TO (MATHEMATICAL) RELATIONS: RELATIONAL REASONING IN MATHEMATICAL DEVELOPMENT**Chair**

Patricia Alexander, University of Maryland, United States

Organiser

Jake McMullen, University of Turku, Finland

Discussant

Minna Hannula-Sormunen, University of Turku, Finland

Exploring the Role of Relational Attention in Math Learning

Lindsey Richland, University of California, Irvine, United States; Hongyang Zhao, University of California Irvine, United States

Multiplicative and analogical reasoning support the learning of fraction arithmetic

Hilma Halme, University of Turku, Department of Teacher Education, Finland; Minna Hannula-Sormunen, University of Turku, Department of Teacher Education, Finland; Jake McMullen, University of Turku, Finland

Profiles of mathematical relational reasoning and students' motivation in fifth grade

Kaja Mädamürk, Tallinn University, Estonia; Jüri Kurvits, Tallinn University, Estonia; Eve Kikas, Tallinn University, Estonia

How a relational preference predicts 6-7-year olds' performance on word problems

Wim Van Dooren, KU Leuven, Belgium; Elien Vanluydt, KU Leuven - University of Leuven, Belgium; Lieven Verschaffel, KU Leuven, Belgium

Session M: 10

Time: 12:00-13:30

Location: AUTH_DC3

SYMPOSIUM: IDENTIFYING AND ASSESSING COMPUTATIONAL THINKING**Chair**

Niels Dohn, Aarhus University, Denmark

Organiser

Nina Bonderup Dohn, University of Southern Denmark, Denmark

Discussant

Crina Damsa, University of Oslo, Norway

A holistic approach to identifying computational thinking in preschool settings

Ane Bjerre Odgaard, University College South Denmark, Denmark

Computational thinking through sewing: Translating across approaches to algorithms

Anna Keune, Technical University of Munich, Germany

Identifying and assessing Computational Thinking in three Danish L1 classrooms

Roland Hachmann, University College South Denmark, Denmark

Developing a sociocultural framework for identifying and assessing Computational Thinking

Nina Bonderup Dohn, University of Southern Denmark, Denmark; Stig Børsen Hansen, University of Southern Denmark, Denmark

Session M: 11

Time: 12:00-13:30

Location: AUTH_T202

SINGLE PAPER: TEAM TEACHING**Chair**

Penelope Watson, University of Auckland, New Zealand

Empirical Research on the Effectiveness of Team Teaching: Conceptual and Methodological Essentials

Dries De Weerd, University of Antwerp, Belgium; Mathea Simons, University of Antwerp, Belgium; Elke Struyf, University of Antwerp, Belgium; Hanne Tack, Ghent University, Belgium

Effective Teaching Behaviour: a Comparison between Individual Teaching and Team Teaching

Aron Decuyper, Ghent University, Belgium; Hanne Tack, Ghent University, Belgium; Mathea Simons, University of Antwerp, Belgium; Ruben Vanderlinde, Ghent University, Belgium

Collaboration and Shared Responsibility in Team Teaching: Development of an Instrument

Aron Decuyper, Ghent University, Belgium; Hanne Tack, Ghent University, Belgium; Mathea Simons, University of Antwerp, Belgium; Ruben Vanderlinde, Ghent University, Belgium

Student teachers' peer team teaching experiences: perceptions, profiles and transition probabilities

Loan De Backer, University of Antwerp, Belgium; Wouter Schelfhout, University of Antwerp, Belgium; Mathea Simons, University of Antwerp, Belgium; Ellen Vandervieren, University of Antwerp, Belgium

Session M: 12

Time: 12:00-13:30

Location: UOM_R09

SINGLE PAPER: MOTIVATIONAL AND METACOGNITIVE BELIEFS IN SELF-REGULATED LEARNING**Chair**

Michael Weinstock, Ben-Gurion University of the Negev, Israel

When high confidence in the group and your peers negatively impacts group performance

Jose Hanham, Western Sydney University, Australia; Adam Hendry, Parramatta Marist High School, Australia

Effects of Feedback Valence and Self-Efficacy on Students' Challenge-Threat Responses

Florence Lucas, Utrecht University, Netherlands; Eva Janssen, Utrecht University, Netherlands; Maaik Taheij, Utrecht University, Netherlands; Tamara Van Gog, Utrecht University, Netherlands

Patterns of social interaction and regulation in CL: The role of groups' metacognitive evaluations

Eija Vuorenmaa, University of Oulu, Finland, Finland; Andy (Khanh Xuan) Nguyen, University of Oulu, Finland; Sanna Järvelä, University of Oulu, Finland

Educational Findings = Common Sense? The Interplay of Hindsight Bias and Educational Misconceptions

Stephanie Pieschl, Technical University of Darmstadt, Germany; Emma L. Goldstein, Technical University of Darmstadt, Germany; Leon Scholz, Technical University of Darmstadt, Germany

Session M: 13

Time: 12:00-13:30

Location: AUTH_TE2

SINGLE PAPER: STUDENT ENGAGEMENT, EXPERIENCES, PERFORMANCE AND LEARNING LOSS DURING COVID-19**Chair**

Christian Hartmann, Technical University Munich, Germany

University students' engagement during the pandemic: The role of organization-based self-esteem

Jannika Haase, Leibniz University Hannover, Germany; Elisabeth Höhne, Leibniz Universität Hannover, Germany; Lysann Zander, Leibniz University Hannover, Germany

COVID-19-related school closures and mathematical performance of grade 3 students in Germany

Hedwig Gasteiger, Osnabrück University, Germany; Karoline M. Sachse, Institut für Qualitätsentwicklung im Bildungswesen, Humboldt-Universität zu Berlin, Germany; Kristoph Schumann, Institut für Qualitätsentwicklung im Bildungswesen, Humboldt-Universität zu Berlin, Germany; Mona Gerve, Osnabrück University, Germany; Axel Schulz, University of Bielefeld, Germany; Maria Engelbert-Kocher, Institut für Qualitätsentwicklung im Bildungswesen, Humboldt-Universität zu Berlin, Germany

Disabled students' educational and psycho-social experiences during the COVID-19 pandemic crisis

Filippos Papazis, National and Kapodistrian University of Athens, Greece; Anastasia Toulia, Department of Special Education, University of Thessaly, Greece; Anastasia Vlachou, Department of Educational Studies, National and Kapodistrian University of Athens, Greece; Theodora Papazoglou, Department of Educational Studies, National and Kapodistrian University of Athens, Greece; Aristeia Fyssa, Department of Educational Sciences and Early Childhood Education, University of Patras, Greece; Lia Tsermidou, Department of Educational Studies, National and Kapodistrian University of Athens, Greece; Stavroula Kalaitzi, Department of Educational Studies, National and Kapodistrian University of Athens, Greece

Catching up after Covid-19: Do school programs for remediating pandemic-related learning loss work?

Martijn Meeter, Vrije Universiteit Amsterdam, Netherlands

Session M: 14

Time: 12:00-13:30

Location: UOM_A04

SINGLE PAPER: PROGRAMS AND TOOLS SUPPORTING STUDENTS WITH SPECIAL EDUCATIONAL NEEDS**Chair**

Albert Logtenberg, ICLON-Leiden University Graduate School of Teaching, Netherlands

The Effectiveness of Feuerstein's Instrumental Enrichment Programme: A Systematic Review

Jo Van Herwegen, UCL Institute of Education, United Kingdom; Petri Partanen, Mid Sweden University, France

The use of ICT in Special Needs Education – a systematic review

Daniela Nussbaumer, University of Applied Sciences of Special Needs Education, Switzerland

The Good Behavior Game for children with Special Educational Needs: A scoping review

Maria Jornevald, Stockholm University, Department of Special Education, Sweden; Hanna Ginner Hau, Stockholm University, Sweden; Lise Roll-Pettersson, Stockholm University, Department of Special Education, Sweden

A large-scale Check in Check out study in Finnish PBS schools: Intervention response and moderators

Mika Paananen, University of Jyväskylä, Finland; Anne Karhu, University of Eastern Finland, Finland; Asko Tolvanen, University of Jyväskylä, Finland

Session M: 15

Time: 12:00-13:30

Location: UOM_A10

SINGLE PAPER: LIFELONG LEARNING IN THE WORKPLACE: MOTIVATIONAL AND BEHAVIOURAL FACTORS**Chair**

Anoush Margaryan, Copenhagen Business School, Denmark

The Effect of Goal-Setting on Work Environment, Transfer Motivation and Transfer of Training

Bastian de Jong, University of Amsterdam, Netherlands; Frank Cornelissen, University of Amsterdam, Netherlands; Joost Jansen in de Wal, University of Amsterdam, Netherlands; Thea Peetsma, University of Amsterdam, Netherlands

Socially shared regulation of learning in workplace teams – When and how does it appear?

Niina Palmu, University of Oulu, Finland; Sanna Järvelä, University of Oulu, Finland; Hanna Jarvenoja, University of Oulu, Finland; Piet Van den Bossche, University of Antwerp, Belgium

Academic teams – a space for individual and cooperative competence development

Franziska Zellweger, Zurich University of Teacher Education, Switzerland; Mirjam Kocher, University of Education Zurich, Switzerland

Exploring qualitative differences in motivation and learning among low-educated adults

Bea Mertens, University of Antwerp, Belgium; Sven De Maeyer, Antwerp University, Belgium; Vincent Donche, University of Antwerp, Belgium

Session M: 16

Time: 12:00-13:30

Location: UOM_A11

SINGLE PAPER: ARGUMENTATION AND REASONING: EDUCATIONAL ASPECTS**Chair**

Jeff Vomund, George Mason University, United States

Perspective-taking and -getting's impact on learning and attitudes in a text-based context

Paulo Jose Medeiros dos Santos, Saarland University, Germany; Armin Weinberger, Saarland University, Germany

Promoting Knowledge Acquisition through Argumentation

Kalyпсо Iordanou, University of Central Lancashire, Cyprus

The impact of inductive reasoning on school achievements

Benő Csapó, University of Szeged, Hungary; Edit Tóth, SZTE Institute of Education, Hungary

Microblogging and classroom talk

Anja Amundrud, University of Oslo, Norway; Maren Omland, Oslo Metropolitan University, Norway; Ingvill Rasmussen, University of Oslo, Norway

Deepening and Broadening the Dialogue of Collaborative Learners with Conversational Agents

Armin Weinberger, Saarland University, Germany; Birk Thierfelder, Universität des Saarlandes, Germany

ANNOTATIONS:

DUE TO THE UNTIMELY PASSING OF PROF. BENŐ CSAPÓ, HIS PRESENTATION ENTITLED "THE IMPACT OF INDUCTIVE REASONING ON SCHOOL ACHIEVEMENTS" WILL NOT BE PRESENTED AT THE CONFERENCE. IN RESPECT AND HONOUR OF HIM, IT WILL REMAIN LISTED AS PART OF THE CONFERENCE PROGRAMME.

Session M: 17

Time: 12:00-13:30

Location: UOM_A08

SINGLE PAPER: SCHOOLS AS SUPPORTIVE CONTEXTS FOR STUDENTS AT-RISK**Chair**

Bob Kapteijns, Behavioural Science Institute, Radboud University Nijmegen, Netherlands

Support for Children from Low-Income Families by Promoting Effective Learning Strategy Use

Yuri Uesaka, The University of Tokyo, Japan

How can schools protect immigrant students from depressive symptoms?

Rekar Abdulhamed, University of Helsinki, Finland; Kirsti Lonka, University of Helsinki, Finland; Lauri Hietajärvi, University of Helsinki, Finland; Reija Klemetti, Finnish Institute for Health and Welfare, Finland

How do teachers deal with non-suicidal self-injurious behavior of students? A case-based study

Baerbel Kracke, University of Jena, Germany; Poldi Kuhl, Leuphana Universität Lüneburg, Germany; Franziska Greiner, Universität Leipzig, Germany

A New Instrument to Assess Trauma-related Components of Teachers' Competencies

Friedrich Linderkamp, University of Wuppertal, School of Education, Germany; Bodo Przbilla, University of Wuppertal, School of Education, Germany; Gino Casale, University of Wuppertal, Germany

Pedagogy of hope in prison? The case of emotional education in a prison – a therapeutic community

Sergio Grossi, Researcher (Marie Curie Fellow) - Complutense University of Madrid, Spain

ANNOTATIONS:

PLEASE NOTE THAT THIS SESSION ROOM HAS CHANGED FROM AUTH_TE1 TO UOM_A08.

Session M: 18

Time: 12:00-13:30

Location: UOM_R05

SINGLE PAPER: LEARNING AND ASSESSMENT IN SCIENCE EDUCATION**Chair**

Jennifer Meyer, Leibniz Institute for Science and Mathematics Education (IPN), Germany

Teacher professionalization in integrating literacy and science education: A design-based research

Hilde Kooiker, Utrecht University/HZ University of Applied Sciences, Netherlands; Ted Sanders, Utrecht University, Netherlands; Jacqueline Evers-Vermeul, Utrecht University, Netherlands

Does using real-world contexts in science teaching improve learning? A field study on electricity

Benedikt Gottschlich, University of Tübingen, Germany; Jan-Philipp Burde, University of Tuebingen, Germany; Thomas Wilhelm, Goethe University Frankfurt, Germany; Liza Dopatka, TU Darmstadt, Germany; Verena Spatz, TU Darmstadt, Germany; Thomas Schubatzky, University of Innsbruck, Austria; Claudia Haagen-Schützenhöfer, University of Graz, Austria; Lana Ivanjek, TU Dresden, Germany; Martin Hopf, University of Vienna, Austria

Developing and Validating Representational Competence Test to Assess Multiple Representations

Fitria Arifiyanti, University of Szeged, Doctoral School of Education, Hungary; Soeharto Soeharto, University of Szeged, Doctoral School of Education, Hungary

The Use of Formative Peer Assessment as a Scaffold during Inquiry Learning in STEM Education

Amber Van Hoe, Ghent University, Belgium; Tijs Rotsaert, Ghent University, Belgium; Tammy Schellens, Ghent University, Belgium

Do we all have the same understanding of subject-specificity in research on teaching quality?

Armin Jentsch, University of Oslo, Norway

Session M: 19

Time: 12:00-13:30

Location: UOM_A13

SINGLE PAPER: TEACHERS' SOCIO-EMOTIONAL COMPETENCIES AND MOTIVATIONAL BELIEFS**Chair**

Idit Katz, Ben-Gurion University of the Negev, Israel

Social-emotional competencies of Austrian primary school teachers

Barbara Gasteiger-Klicpera, University of Graz, Austria; Christina Oswald, University of Graz, Austria; Lisa Paleczek, University of Graz, Austria

Implicit theories of intelligence in German student teachers

Franziska Froberg, Universität Leipzig, Germany; Christin Lotz, University Leipzig, Germany; Anne Deiglmayr, University of Leipzig, Germany

The role of education in early childhood educators' skills in self- and co-regulation of emotions

Kristiina Mänty, University of Oulu, Finland; Susanna Kinnunen, University of Oulu, Finland; Outi Rinta-Homi, University of Oulu, Finland; Hanna Jarvenoja, University of Oulu, Finland; Jouni Peltonen, University of Oulu, Finland

Changes in student teachers' self-efficacy and relations to emotion words in written reflections

Anja Henke, University of Potsdam, Germany; Andrea Westphal, Universität Greifswald, Germany; Isabell Hußner, University of Potsdam, Germany; Rebecca Lazarides, University of Potsdam, Germany

Session M: 20

Time: 12:00-13:30

Location: UOM_R08

SINGLE PAPER: EYE TRACKING STUDIES IN TEACHER PROFESSIONAL DEVELOPMENT**Chair**

Kasia Banas, University of Edinburgh, United Kingdom

Perceptions of classroom disruptions among (prospective) teachers: a mixed methods approach

Ann-Sophie Grub, Saarland University, Germany; Roland Bruenken, Saarland University, Germany; Doris Lewalter, Technical University of Munich (TUM), Germany; Antje Biermann, Saarland University, Germany

Teachers' stress influences the effect of visual focus of attention on child-centred practices

Anna-Liisa Jögi, Tallinn University, Estonia; Saswati Chaudhuri, University of Jyväskylä, Finland; Eija Pakarinen, University of Jyväskylä, Finland; Marja-Kristiina Lerkkanen, University of Jyväskylä, Finland

Pipelines and initial reports from machine learning classification of teacher gaze in the classroom

Nora McIntyre, University of Southampton, United Kingdom

A Meta-Analytic Review of Eye-Tracking Studies to Investigate Teachers' Professional Vision

Özün Keskin, University of Augsburg, Germany; Andreas Gegenfurtner, University of Augsburg, Germany; Tina Seidel, Technische Universität München, Germany; Kathleen Stürmer, University of Tübingen, Germany

Session M: 21

Time: 12:00-13:30

Location: UOM_A07

SINGLE PAPER: TECHNOLOGY-ENHANCED LEARNING AND INSTRUCTION: FACTORS THAT MATTER**Chair**

Sunet Grobler, University of Innsbruck - Institute for Teacher Education and School Research, Austria

Adapting the Technological Pedagogical and Content Knowledge (TPACK) survey for higher education

Ha Nguyen, University of Groningen, Netherlands; Jolien Mouw, University of Groningen, Faculty of Behavioural and Social Sciences, GION Education/Research, Netherlands; Angeliki Mali, University of Crete, Greece; Hanke Korpershoek, University of Groningen, Netherlands; Jan-Willem Strijbos, University of Groningen, Netherlands

TPACK and the design of teaching against misinformation in five school subjects

Thomas Nygren, Uppsala University, Sweden; Malin Tväråna, Uppsala University, Sweden; Carl-Anton Werner Axelsson, Uppsala University, Sweden

The Interplay Between Technology-Enhanced Item Formats and Test-Taker Cognition

Burcu Arslan, ETS Global, Netherlands; Blair Lehman, ETS, United States; Madeleine Keehner, ETS, United States; Marlit Annalena Lindner, IWM - Leibniz-Institut für Wissensmedien, Universität Tübingen, Germany

Both quantity and quality of technology integration matter

Tessa Consoli, University of Zurich, Institute of Education, Switzerland; Maria-Luisa Schmitz, Institute of Education, University of Zurich, Switzerland; Chiara Antoniotti, Swiss Federal University for Vocational Education and Training (SFUVET), Switzerland; Dominik Petko, University of Zurich, Switzerland; Alberto Cattaneo, Swiss Federal University for Vocational Education and Training, Switzerland; Philipp Gonon, Institute of Education, University of Zurich, Switzerland

Session M: 22

Time: 12:00-13:30

Location: AUTH_T102

SINGLE PAPER: TEACHER ENTHUSIASM**Chair**

Antti Laherto, University of Helsinki, Finland

How to become an enthusiastic teacher?—Motivational antecedents in early stages of teacher education

Christin Lotz, University Leipzig, Germany; Patrick Hawlitschek, Institute for Educational Quality Improvement (IQB), Germany; Anne Deiglmayr, University of Leipzig, Germany

Influence of students' performance and teachers' enthusiasm on teachers' use of engaging messages

Samuel Falcón, University of Las Palmas de Gran Canaria, Spain; Jaime Leon, University of Las Palmas de Gran Canaria, Spain; Wilfried Admiraal, Oslo Metropolitan University, Centre for the Study of Professions, Norway

Promoting student enthusiasm: The role of teacher enthusiasm, teaching methods and time schedule

Eline Camerman, KU Leuven, Belgium; Jeroen Lavrijsen, KU Leuven, Belgium; Peter Kuppens, KU Leuven, Belgium; Karine Verschuere, KU Leuven, Belgium

Session M: 23

Time: 12:00-13:30

Location: UOM_R03

POSTER PRESENTATION: DIGITAL LITERACY AND LEARNING**Chair**

Marjaana Puurtinen, University of Turku, Finland

The Changing Demands on Diverse Faculty's Digital Competence in Hybrid Learning Environments

Natalia Auer, Malmö University, Sweden; Katherine Doerr, Faculty of Education and Society, Malmö University, Sweden

What happens when the Novelty wears off? An empirical investigation of learning with Virtual Reality

Sara Klingenberg, University of Copenhagen, Denmark; Guido Makransky, University of Copenhagen, Denmark

(How) can word processors improve writing in secondary classes? Results of an Intervention Study.

Viktoria Michels, Universität zu Köln/ University of Cologne, Germany; Till Woerfel, Mercator Institute for Language and Literacy Education, Germany; Michael Becker-Mrotzek, Mercator Institute for Language and Literacy Education, Germany

Visual behavior of students differing in justification beliefs when reading conflicting reports

Meng-Jung Tsai, National Taiwan Normal University, Taiwan; Ching-Yeh Wang, National Kaohsiung University of Hospitality and Tourism, Taiwan; An-Hsuan Wu, National Taiwan Normal University, Taiwan; Ivar Bråten, University of Oslo, Norway

Regular media use and learning effects on the ability to critically reason with digital media

Dominik Braunheim, Johannes Gutenberg-Universität, Germany

Designing for learning in the digital transformation: a design-based research

Monique Docter, University of Twente, Netherlands; Maaïke Endedijk, University of Twente, Netherlands

Session M: 24

Time: 12:00-13:30

Location: UOM_R02

POSTER PRESENTATION: SUPPORTING EARLY CHILDHOOD EDUCATION

Chair

Victoria Johansson, Kristianstad University, Sweden

Supporting knowledge transfer in early childhood education – a longitudinal evaluation study

Daniela Ulber, HAW Hamburg, Germany; Nina Hogrebe, University of Applied Sciences Hamburg, Germany; Valerie Bergmann, HAW Hamburg, Germany

Cross-cultural differences in preschool teachers' perceptions of teacher-child emotional dependency

Sofie Hendrix, KU Leuven, Belgium; Jantine Spilt, KU Leuven, Belgium; Joana Cadima, University of Porto, Portugal; Ana Camacho, University of Porto, Portugal; Tiago Ferreira, University of Porto, Portugal; Athanasios Gregoriadis, Aristotle University of Thessaloniki, Greece; Helma Koomen, Research Institute of Child Development and Education, Netherlands; Marja-Kristiina Lerkkanen, University of Jyväskylä, Finland; Andrea Eva Otero Mayer, National Distance Education University, Spain; Iwona Omelanczuk, Faculty of Education, University of Warsaw, Poland; Eija Pakarinen, University of Jyväskylä, Finland; Jochem Thijs, University Utrecht, Netherlands; Olga Wyslowska, Faculty of Education, University of Warsaw, Poland; Karine Verschueren, KU Leuven, Belgium

Effect of childcare teachers' positions on their attribution of responsibility for problems.

Maori Urakawa, Nagasaki Junshin Catholic University, Japan

The Relationship between Educator-Child-Ratio and Pedagogical Quality in ECEC Explained

Kristina Hausladen, Otto-Friedrich-University Bamberg, Germany; Katrin Wolf, Otto-Friedrich-University of Bamberg, Germany

E-assessment instrument for assessing children's development and the feedback it offers

Anne-Mai Meesak, Tallinn University, Institute of Educational Sciences, Estonia

'A story a day': a study on implicit learning of syntactic structures

Athina Ntalli, University of Oxford, United Kingdom; Jelena Mirkovic, University of York, United Kingdom; Akhila Pydah, Independent researcher, India; Adhvikha Shetty, Promise Foundation, India; Pooja Pandith, Promise Foundation, India; Usha M N, The Promise Foundation, India; Sanjana Nagendra, The Promise Foundation, India; Kala B., Promise Foundation, India; Chandana S., Promise Foundation, India; Gideon Arulmani, Promise Foundation, India; Sonali Nag, University of Oxford, United Kingdom

Session M: 25

Time: 12:00-13:30

Location: UOM_R01

POSTER PRESENTATION: E-LEARNING AND ONLINE LEARNING IN STUDYING METACOGNITION, EMOTION AND BEHAVIOUR

Chair

Joni Lämsä, University of Oulu, Finland

Fostering self-regulated learning with metacognitive prompts in an online learning environment

Rebecca Pape, Catholic University of Eichstätt-Ingolstadt, Germany

Sparkling enjoyment in online synchronous education: The function of emotional mimicry

Muhterem Dindar, Tampere University, Finland; Anne Christiane Frenzel, Ludwig-Maximilians-Universität München, Germany

Self or System – Who regulates? The Effects of Prompts in Adaptive Learning

Patrick Albus, Ulm University, Germany; Aileen Schlichting, Universität Ulm / Institute of Psychology and Education, Germany; Tina Seufert, Ulm University, Germany

Improving students' Life Skills to seed for the future. An Italian Faculty Development program

Roberta Silva, University of Verona, Italy; Luigina Mortari, University of Verona, Italy; Alessia Bevilacqua, University of Verona, Italy

The facilitators and barriers of online-delivered teacher training

Catalina Lomos, LISER - Luxembourg Institute for Socio Economic Research, Luxembourg; Hans Luyten, University of Twente, Netherlands; Filipe Lima da Cunha, SCRIPT (Service de Coordination de la Recherche et de l'Innovation pédagogiques et technologiques), Luxembourg; Frauke Kesting, SCRIPT (Service de Coordination de la Recherche et de l'Innovation pédagogiques et technologiques), Luxembourg

Anthropomorphism and Emotional Valence in Instructional Images

Sascha Schneider, University of Zurich, Switzerland; Nadine Scheller, Technische Universität Chemnitz, Germany; Sebastian Jansen, Technische Universität Chemnitz, Germany

Session M: 26

Time: 12:00-13:30

Location: UOM_A06

WORKSHOP: ANALYSIS OF HIGH-AROUSAL TEACHING EPISODES THROUGH VIDEO-RECORDED DATA

Analysis of high-arousal teaching episodes through video-recorded data

Liisa Postareff, HAMK University of Applied Sciences, Finland; Heta Rintala, Häme University of Applied Sciences, Finland; Anna Parpala, University of Helsinki, Finland; Petri Nokelainen, Tampere University, Finland; Milla Räisänen, University of Helsinki, Finland; Anna Wallin, University of Tampere, Finland; Ilmari Puhakka, Tampere University, Finland

Session M: 27

Time: 12:00-13:30

Location: UOM_A05

ICT DEMONSTRATION: WIKADOE: A DUTCH WEBSITE TO MONITOR AND INCREASE THE SELF-REGULATED LEARNING OF PRIMARY SCHOOL PUPILS**Wikadoe: a dutch website to monitor and increase the self-regulated learning of primary school pupils**

Natalie Boelen, Hogeschool PXL, Belgium; Jolien Quinten, Hogeschool PXL, Belgium

Lunch / Sponsored Session: 1

Time: 13:30-14:30

Location: UOM_CR

SPONSORED SESSION: MDPI – ACADEMIC OPEN ACCESS PUBLISHING**MDPI – Academic Open Access Publishing**

Nemou Mihai-Alexandru, MDPI AG, Romania; Aleksandar Antić, MDPI, Switzerland

ANNOTATIONS:

THIS SESSION WILL TAKE PLACE IN AUTH_T.EVENTSROOM (10TH FLOOR) INSTEAD OF UOM_CR.

Session N: 1

Time: 14:45-16:15

Location: UOM_CH

INVITED SYMPOSIUM: AVENUES TO IMPROVE STUDENTS' LEARNING WITH MULTIPLE DOCUMENTS**Chairs**

Carolin Hahnel, DIPF | Leibniz Institute for Research and Information in Education, Centre for International Student Assessment (ZIB), Germany; Cornelia Schoor, Leibniz Institute for Educational Trajectories (LIfBi), Germany

Organisers

Carolin Hahnel, DIPF | Leibniz Institute for Research and Information in Education, Centre for International Student Assessment (ZIB), Germany; Cornelia Schoor, Leibniz Institute for Educational Trajectories (LIfBi), Germany

Discussant

Ladislao Salmerón, University of Valencia, Spain

Students Engaging in Multiple Texts Literacy Task: Investigation of Integration

Elina Hämäläinen, University of Jyväskylä, Finland; Carita Kili, Tampere University, Finland

Students' task model before and after working on a multiple-document task

Cornelia Schoor, Leibniz Institute for Educational Trajectories (LIfBi), Germany; Jean Francois Rouet, University of Poitiers, Center for Research on Cognition and Learning, France; MaryAnne Britt, Northern Illinois University, United States

Seems like a difficult task! Monitoring accuracy in multiple document comprehension

Huib Tabbers, Erasmus University Rotterdam, Netherlands; Carolin Hahnel, DIPF | Leibniz Institute for Research and Information in Education, Centre for International Student Assessment (ZIB), Germany; Daniel Schiffrer, DIPF | Leibniz Institute for Research and Information in Education, Germany; Cornelia Schoor, Leibniz Institute for Educational Trajectories (LIfBi), Germany

Does individualized feedback promote favorable behaviors in multiple document reading?

Carolin Hahnel, DIPF | Leibniz Institute for Research and Information in Education, Centre for International Student Assessment (ZIB), Germany; Daniel Bengs, DIPF | Leibniz Institute for Research and Information in Education, Germany; Daniel Biedermann, DIPF | Leibniz Institute for Research and Information in Education, Germany; George-Petru Ciordas-Hertel, DIPF | Leibniz Institute for Research and Information in Education, Germany; Beate Eichmann, DIPF | Leibniz Institute for Research and Information in Education, Centre for International Student Assessment (ZIB), Germany; Ilka Wolter, Leibniz Institute for Educational Trajectories (LIfBi), Germany; Cordula Artelt, Leibniz Institute for Educational Trajectories, Germany; Frank Goldhammer, DIPF | Leibniz Institute for Research and Information in Education, Centre for International Student Assessment (ZIB), Germany

ANNOTATIONS:

SIG 2 INVITED SYMPOSIUM

Session N: 2

Time: 14:45-16:15

Location: AUTH_CH

INVITED SYMPOSIUM: SPONTANEOUS MATHEMATICAL FOCUSING TENDENCIES IN EARLY CHILDHOOD**Chair**

Minna Hannula-Sormunen, University of Turku, Finland

Organiser

Jake McMullen, University of Turku, Finland

Discussant

Riikka Mononen, University of Oulu, Finland

Spontaneous focusing on number in parent-child interactions

Alex Silver, University of Pittsburgh, United States; Melissa Libertus, University of Pittsburgh, United States

Spontaneous Focusing on Magnitudes and the development of numerical abilities and arithmetic

Arnaud Viarouge, Paris Cité University CNRS UMR 8240, France; Nydia Vurdah, Paris Cité University, France

Longitudinal assessment of attention to numerosity

Michele Mazzocco, University of Minnesota, United States; Jeffrey Bye, University of Minnesota, United States

SFON and Spontaneous Focusing On Numerical Order as predictors of early numerical development

Minna Hannula-Sormunen, University of Turku, Finland; Jo Van Hoof, University of Turku, Finland; Heidi Harju, University of Turku, Finland; Cristina Nanu, University of Turku, Finland; Jake McMullen, University of Turku, Finland

ANNOTATIONS:

E-CER INVITED SYMPOSIUM

Session N: 3

Time: 14:45-16:15

Location: HELEXPO_CC

INVITED SYMPOSIUM: OPPORTUNITIES & CHALLENGES OF LEARNING AND ASSESSMENT IN DEMOCRATIC CITIZENSHIP EDUCATION IN SCHOOLS**Chair**

Lihong Huang, Oslo Metropolitan University, Norway

Organiser

Lihong Huang, Oslo Metropolitan University, Norway

Discussant

Jens Bruun, Aarhus University, Denmark

Generational differences in Institutional Trust among Adolescents in Flanders

Ellen Claes, KU Leuven, Belgium; Maria Magdalena Isac, University of Groningen, Netherlands; Linde Stals, KU LEUVEN, Belgium

“We just try to learn as much as possible” in Norwegian Social Science Classrooms

Anders Kjøstvedt, Oslo Metropolitan University, Norway; Evy Jøsok, Oslo Metropolitan University, Norway

The effect of cooperative learning on student political efficacy: A formative intervention study

Eva Kosberg, OsloMet, Norway

Challenges & possibilities teachers face when assessing to promote democratic citizenship competence

Nanna Paaske, OsloMet, Norway; Siri Mohammad-Roe, Oslo Metropolitan University, Norway; Wouter Smets, Karel de Grote University college, Belgium; Ama Amitai, Karel de Grote Hogeshoo, Belgium; Naomi Alexia Randazzo, Centro Iniziative Ricerche e Programmazione economica, Italy; Lihong Huang, Oslo Metropolitan University, Norway

ANNOTATIONS:

SIG 13 INVITED SYMPOSIUM

Session N: 4

Time: 14:45-16:15

Location: AUTH_T002

SYMPOSIUM: ADOLESCENTS' MOTIVATIONAL PROFILES IN DIFFERENT LEARNING AREAS. RELATIONS WITH STUDENT OUTCOMES**Chair**

Eve Kikas, Tallinn University, Estonia

Discussant

Anastasia Efklides, Aristotle University of Thessaloniki, Greece

Adolescents' motivational profiles in Math and relations with metacognition, emotions & achievement

Dimitrios Moustakas, Aristotle University of Thessaloniki, Greece; Eleftheria Gonida, Aristotle University of Thessaloniki, Greece; Dimitrios Stamovlasis, Aristotle University of Thessaloniki, Greece

Expectancy-value-cost profiles in math and language arts, behavioral engagement, and achievement

Kukka-Maaria Polso, University of Helsinki, Finland; Heta Tuominen, University of Eastern Finland, Finland; Petri Ihantola, University of Helsinki, Finland; Markku Niemivirta, University of Eastern Finland, Finland

Motivational profiles in biology and physics, relations with learning and need satisfaction

Kati Aus, Institute of Educational Sciences, Estonia; Ita Puusepp, University of Helsinki, Finland; Eve Kikas, Tallinn University, Estonia

Profiles of learning motivation and strategies related to grades and psychological well-being

Eliis Härma, Tallinn University, Estonia; Aleksander Pulver, Tallinn University, Estonia; Eve Kikas, Tallinn University, Estonia

Session N: 5

Time: 14:45-16:15

Location: UOM_CR

SYMPOSIUM: MEASURING EMOTIONS IN EDUCATION – POSSIBILITIES AND LIMITS OF NEW APPROACHES**Chair**

Matthias Huber, University College for Teacher Education Carinthia, Austria

Organiser

Kerstin Helker, Eindhoven University of Technology, Netherlands

Discussant

Julia Morinaj, University of Bern, Switzerland

The robust implicit beliefs about emotions scale (R-IBES) for primary school students

Daniela Raccanello, University of Verona, Italy; Giada Vicentini, University of Verona, Italy; Angelica Moè, University of Padova, Italy; Stephanie Lichtenfeld, Universität Hamburg, Germany; Roberto Burro, University of Verona, Italy

The sense of security and comfort in the classroom – validation of a new questionnaire

Matthias Huber, University College for Teacher Education Carinthia, Austria; Markus Herrmann, University College of Teacher Education Carinthia, Austria

The development of a measure to investigate dealing with emotions in teams

Sebastian Gerbeth, University Regensburg, Germany; Elena Stamouli, University of Regensburg, Faculty of Human Sciences, Germany; Regina Mulder, University of Regensburg, Germany

Teachers' intrinsic orientation for the profession: Scale development and validation

Xiangyuan Feng, University of Groningen, Netherlands; Michelle Helms-Lorenz, University of Groningen, Netherlands; Ridwan Maulana, GION - University of Groningen, Netherlands

Session N: 6

Time: 14:45-16:15

Location: UOM_A02

SYMPOSIUM: TACKLING POLARIZATION IN EDUCATION: TEACHER PRACTICES, INTERVENTIONS AND PARADIGMS**Chairs**

Geerte Savenije, University of Amsterdam, Netherlands;
Bjorn Wansink, Utrecht University, Netherlands

Organiser

Lee Jerome, Middlesex University, United Kingdom

Discussant

Geerte Savenije, University of Amsterdam, Netherlands

From “Flat” to “Deep” Multiperspectivity: Discussing Controversial Issues in Classrooms

Bjorn Wansink, Utrecht University, Netherlands; Sanne Akkerman, Utrecht University, Netherlands; Saro Lozano Parra, Utrecht University, Netherlands

Avoidance and risk-taking in teaching controversial history: Competing voices

Judith Pace, University of San Francisco, United States

The Impact of a Political Simulation Game on Informed Citizenship (and Against Polarization)

Jeremy Stoddard, University of Wisconsin - Madison, United States

Education for peace and hope: review of interventions to counter polarization

Semiha Sözeri, Utrecht University, Netherlands; Maria De Haan, Utrecht University, Netherlands

Session N: 7

Time: 14:45-16:15

Location: AUTH_DC2

SYMPOSIUM: IDENTIFYING DIGITAL READING STRATEGIES IN ORDER TO FACILITATE DIGITAL READING**Chair**

Aurora Troncoso-Ruiz, Behavioural Science Institute,
Radboud University Nijmegen, Netherlands

Discussant

Carita Kiili, Tampere University, Finland

Operationalization and Effectiveness of Reading Strategies in Digital Reading – A research synthesis

Lisa Ziernwald, Technical University of Munich, Centre for International Student Assessment (ZIB), Germany; Carolin Hahnel, DIPF | Leibniz Institute for Research and Information in Education, Centre for International Student Assessment (ZIB), Germany; Frank Reinhold, University of Education Freiburg, Germany; Doris Holzberger, Technical University of Munich (TUM) & ZIB (Centre for International Student Assessment), Germany

The impact of audio support on reading strategies in students with dyslexia

Eliane Segers, Radboud University, Netherlands; Carolien A. N. Knoop-van Campen, Radboud University Nijmegen, Netherlands

Hyperlink structures is crucial for attention and comprehension during hypertext reading

Bertram Opitz, Brandenburg Medical School, Germany

Explaining individual differences in digital reading: digital media, attention and print exposure

Aurora Troncoso-Ruiz, Behavioural Science Institute, Radboud University Nijmegen, Netherlands; Naomi van Bergen, Behavioural Science Institute, Radboud University Nijmegen, Netherlands; Anouk Bakker, Behavioural Science Institute, Radboud University Nijmegen, Netherlands; Liesbeth Craje, Behavioural Science Institute, Radboud University Nijmegen, Netherlands; Marco Van de Ven, Behavioural Science Institute, Radboud University Nijmegen, Netherlands; Eliane Segers, Behavioural Science Institute, Radboud University Nijmegen, Netherlands

Session N: 8

Time: 14:45-16:15

Location: UOM_A03

SYMPOSIUM: CAN EDUCATIONAL APPS SUPPORT EARLY LEARNING? CURRENT EVIDENCE ON APP DESIGN AND EVALUATION**Chair**

Jo Van Herwegen, UCL Institute of Education, United Kingdom

Discussant

Laura Outhwaite, University College London, IOE, United Kingdom

Understanding How Educational Maths Apps Can Enhance Learning: A Content Analysis and QCA

Laura Outhwaite, University College London, IOE, United Kingdom; Erin Early, QUB, United Kingdom; Christothea Herodotou, Open University, United Kingdom; Jo Van Herwegen, UCL Institute of Education, United Kingdom

Evaluation of Digital Interventions Fostering Early Reading Skills: A Meta-Analysis

Fien Depaepe, KU Leuven, Belgium; Stefanie Vanbecelaere, KU Leuven, Belgium; Sameh Said-Metwaly, KU LEUVEN, Belgium; Wim Van den Noortgate, KU LEUVEN, Belgium; Bert Reynvoet, KU LEUVEN, Belgium

Understanding Early Mathematical Development using Large Scale Educational App Data

Zahra Siddiqui, UCL, United Kingdom; Laura Outhwaite, University College London, IOE, United Kingdom; Jo Van Herwegen, UCL Institute of Education, United Kingdom

Evaluating the Effectiveness and Design of an Educational Spelling Application for First Graders

Cynthia Boggio, Grenoble Alpes University, France; Ahmed Zaher, Université Grenoble Alpes, France; Marie-Line Bosse, Université Grenoble Alpes, France

Session N: 9

Time: 14:45-16:15

Location: UOM_A10

SINGLE PAPER: BLENDED AND HYBRID LEARNING**Chair**

Panayioti Metallidou, Aristotle University of Thessaloniki, Greece

Blended Learning Quality as Crucial Factor for an Effective Flexible Learning Study Program

Claude Müller, Zurich University of Applied Sciences, Switzerland; Thoralf Mildenerger, Zurich University of Applied Sciences, Switzerland; Daniel Steingruber, std@zhaw.ch, Switzerland

Students' sidetalk in parallel to co-occurring teaching. Changing participation in hybrid classrooms

Fritjof Sahlström, University of Helsinki, Finland; Marie Nilsberth, Karlstad University, Sweden

Reducing motivational costs of STEM students – a blended learning program in higher education

Lena Sofie Kegel, Educational Psychology, University of Münster, Germany; Derya Turhan, Educational Psychology, University of Münster, Germany; Carola Grunschel, Educational Psychology, University of Münster, Germany

Hybrid learning as a tool to ensure education: a long-term perspective from German pilot schools

Can Küplüce, Ruhr-University Bochum, Germany; Denise Demski, Ruhr-University Bochum, Institute of Educational Sciences, Germany; Philipp Matthes, Ruhr-University Bochum, Institute of Educational Sciences, Germany; Grit Im Brahm, Ruhr-University Bochum, Institute of Educational Sciences, Germany; Gabriele Bellenberg, Ruhr-University Bochum, Institute of Educational Sciences, Germany

Session N: 10

Time: 14:45-16:15

Location: UOM_A08

SINGLE PAPER: TEACHERS AND TEACHING DURING THE COVID-19 PANDEMIC I**Chair**

Elisabeth Mundt, University of Kassel, Germany

Teachers' online readiness in times of crises: Experience from Norway and US

Greta Björk Gudmundsdottir, University of Oslo, Faculty of Education. Department of Teacher Education and School Research., Norway; Dawn Hathaway, Georg Mason University, Division of Learning Technologies, School of Education, United States

Online Faculty Mentoring: Creating a holding environment in times of crisis

Helga Dörner, Eötvös Loránd University, Hungary; Kinga Kaplar-Kodacsy, Eötvös Loránd University, Hungary

Teaching Practicum During Pandemic

Seda Saraç, Bahcesehir University, Turkiye; Betül Tarhan, University of Georgia, United States; Hülya Gülay Ogelman, Sinop University, Turkiye

New methods; new insights: Making sense of teachers' experiences with online education

Fazilat Siddiq, University of South-Eastern Norway, Norway; Jo Tondeur, Vrije Universiteit Brussel, Belgium; Sarah Howard, University of Wollongong, Australia; Ronny Scherer, University of Oslo, Norway

ANNOTATIONS:

PLEASE NOTE THAT THIS SESSION ROOM HAS CHANGED FROM AUTH_TE1 TO UOM_A08.

Session N: 11

Time: 14:45-16:15

Location: UOM_A04

SINGLE PAPER: LEARNING AND TEACHING IN CULTURALLY DIVERSE SETTINGS**Chair**

Doris Kristina Raave, University of Tartu, Estonia

Linguistic, affective, and educational contributions to bicultural identity in minority adolescents

Elisavet Chrysochoou, Aristotle University of Thessaloniki, Greece; Aleksandra Laketa, South East European Research Center (SEERC), Greece; Arvesa Studenica, South East European Research Center (SEERC), Greece; Ana B. Vivas, CITY College, University of York Europe Campus, Greece

Beyond the Binary Classification– Testing a Disparity-Weighted Indicator of Cultural Diversity

Merle-Sophie Thielmann, University of Mannheim, Germany; Karina Karst, University of Mannheim, Germany; Benedict C. O. F. Fehring, University of Mannheim, Germany

Conditions for the implementation of intercultural practices in educational settings in Portugal

Rui Maio, Faculty of Psychology and Educational Sciences of the University of Porto, Portugal; Sofia Guichard, University of Porto - Faculty of Psychology and Educational Sciences, Portugal; Joana Cadima, University of Porto, Portugal

Multiply Marginalized and Underrepresented Teachers' Intersecting Identities

Ji Hong, University of Arizona, United States; Dionne Cross Francis, University of North Carolina at Chapel Hill, United States; Faqryza Ab Latif, University of Arizona, United States; Taylor Roloff, University of Arizona, United States; Kelly Chong, Round Rock Children's Therapy Center, United States; Paul Schutz, University of Arizona, United States

Session N: 12

Time: 14:45-16:15

Location: UOM_A05

SINGLE PAPER: CHOOSING THE TEACHING PROFESSION, PREPAREDNESS AND FUTURE VISION**Chair**

Rui WANG, University of Cambridge, China

Who becomes a teacher and why?

Elaine Munthe, University of Stavanger, Norway; Beng Huat See, Durham University, School of Education, United Kingdom; Sarah Ross, Durham University, United Kingdom; Loraine Hitt, Durham University, School of Education, United Kingdom; Nada El Soufi, Durham University, School of Education, United Kingdom

Do student teachers' FIT-Choice motives explain how they study during teacher education?

Michael Goller, University of Kassel, Germany; Carina Caruso, University of Paderborn, Germany; Heidi Hyytinen, University of Helsinki, Finland; Jani Ursin, University of Jyväskylä, Finland; Katja Vähäsantanen, Häme University of Applied Sciences, Finland

Investigating the Impact of a Year-Long Internship on Candidates' Perceptions of Preparedness

Michael Putman, University of North Carolina Charlotte, United States

Future Vision of Teacher Education Students

Christian Kraller, Teacher Education and School Research, Austria; Sabrina Bacher, University of Innsbruck, Austria, Austria; Claudia Schreiner, University of Innsbruck, Austria

Session N: 13

Time: 14:45-16:15

Location: AUTH_DC3

SINGLE PAPER: SECONDARY EDUCATION STUDENTS' MATHEMATICAL THINKING**Chair**

Alfredo Jornet, Universitat de Girona, Spain

On noticing and framing of student mathematical thinking

Thorsten Scheiner, Institute for Learning Sciences and Teacher Education, Australia

Eliciting and Attending to Students' Mathematical Thinking in Clinical Interviews

Nicora Placa, Hunter College, City University of New York, United States

Is the correlation between fraction and algebra knowledge based more on concepts than procedures?

Claire Forsmann, University of Trier, Germany; Michael D'Erchie, Technical University of Munich, Germany; Andreas Obersteiner, Technical University of Munich, Germany; Michael Schneider, University of Trier, Germany

The trade-off between complexity and accuracy in computer-based adaptive instruction on fractions

Timo Leuders, University of Education Freiburg, Germany; Antje Boomgaarden, University of Education Freiburg, Germany; Katharina Loibl, University of Education Freiburg, Germany

Session N: 14

Time: 14:45-16:15

Location: UOM_R05

SINGLE PAPER: EDUCATION FOR SUSTAINABLE DEVELOPMENT**Chair**

Charleen Brand, Ruhr University Bochum, Institute of Educational Research, Germany

A Systematic Review on Sustainable Educational Innovations: The Role of (Distributed) Leadership

Christa Krijgsman, Fontys Hogeschool/Kenniscentrum Youth Education for Society, Netherlands; Marco Snoek, Hogeschool van Amsterdam, Netherlands; Marieke Thurlings, Eindhoven University of Technology, Netherlands

Sustainability and STEM Education: STEM Teachers' contextualization of sustainable development goals

Zerrin Doganca Kucuk, Maynooth University, Ireland; Defne Yabas, Bahcesehir University, Turkiye; Gaye Defne Ceyhan, Bogazici University, Turkiye; Mehmet Sencer Corlu, Oslo Metropolitan University, Norway

Pedagogical Pattern Navigator in Education for Sustainable Development

Bernadette Dilger, University of St.Gallen, Switzerland

The Necessity of Utopia for Education for Sustainable Development

Yves Mühlematter, PHBern, University of Teacher Education; University of Zürich, Switzerland

Session N: 15

Time: 14:45-16:15

Location: UOM_A11

SINGLE PAPER: TEACHERS' PROFESSIONAL DEVELOPMENT: RECIPROCAL PEER OBSERVATION AND TEAM TEACHING**Chair**

Georg Krammer, University College of Teacher Education Styria, Austria

Teachers' closeness of professional relationships and learning in reciprocal peer observation

Jesús Ribosa, UAB Universitat Autònoma de Barcelona, Spain; Ingrid Noguera, UAB Universitat Autònoma de Barcelona, Spain; Meritxell Monguillot, UB Universitat de Barcelona, Spain; Begoña De la Iglesia Mayol, Universitat de les Illes Balears, Spain

Impact of Reciprocal Peer Observation on teacher perception of collaboration among teachers

Ester Miquel, Universitat Autònoma de Barcelona, Spain; Mariona Corcelles, Universitat Ramon Llull, Spain; Ingrid Sala, Universitat Ramon Llull, Spain; Mireia Soler, Universitat Autònoma de Barcelona, Spain; David Duran Gisbert, Universitat Autònoma de Barcelona, Spain

Professional development: Teachers' reasons for peer selection for classroom observations

Irene Douwes-van Ark, University of Groningen, Netherlands; Jasperina Brouwer, University of Groningen, Netherlands; Ine Noben, University of Groningen, Netherlands

The teaching behaviour of beginning team teachers at the beginning of a team teaching intervention

Dries Mariën, University of Antwerp, Belgium; Elke Struyf, University of Antwerp, Belgium; Ruben Vanderlinde, Ghent University, Belgium; Hanne Tack, Ghent University, Belgium

Session N: 16

Time: 14:45-16:15

Location: UOM_A06

SINGLE PAPER: LEARNING ANALYTICS IN SELF-REGULATED LEARNING**Chair**

Margarida Margarida Romero, Université Côte d'Azur, France

Understanding and supporting writing processes with trace data

Lyn Lim, Technical University of Munich, Germany; Mladen Raković, Monash University, Australia; Sehrish Iqbal, Monash University, Australia; Tongguang Li, Monash University, Australia; Yizhou Fan, Peking University, China; Shaveen Singh, Monash University, Australia; Surya Surendrannair, Monash University, Australia; Jonathan Kilgour, Edinburgh University, United Kingdom; Joep van der Graaf, Radboud University Nijmegen, Netherlands; Inge Molenaar, Radboud University Nijmegen, Netherlands; Maria Bannert, Technical University of Munich (TUM), Germany; Johanna Moore, Edinburgh University, United Kingdom; Dragan Gasevic, Monash University, Australia

Evaluating the Effectiveness of Personalized Scaffoldings on SRL using Ordered Network Analysis

Yizhou Fan, Peking University, China; Tongguang Li, Monash University, Australia; Yuanru Tan, University of Wisconsin-Madison, United States; Mladen Raković, Monash University, Australia; Joep van der Graaf, Radboud University Nijmegen, Netherlands; Lyn Lim, Technical University of Munich, Germany; Shaveen Singh, Monash University, Australia; Johanna Moore, University of Edinburgh, United Kingdom; Inge Molenaar, Radboud University Nijmegen, Netherlands; Maria Bannert, Technical University of Munich (TUM), Germany; Dragan Gasevic, Monash University, Australia

Promoting effective use of domain information in simulation-based scientific inquiry learning

Mari Fukuda, Simon Fraser University, Canada; John Nesbit, Simon Fraser University, Canada; Philip Winne, Simon Fraser University, Canada

Developmental Differences in Students' Self-Regulated Learning with Game-based Learning Environments

Saerok Park, University of Central Florida, United States; Daryn Dever, University of Central Florida, United States; Megan Wiedbusch, University of Central Florida, United States; Roger Azevedo, University of Central Florida, United States

Session N: 17

Time: 14:45-16:15

Location: UOM_A13

SINGLE PAPER: TEAM WORK IN DIFFERENT EDUCATIONAL SETTINGS**Chair**

Carlos González, Pontificia Universidad Católica de Chile, Chile

Physics and Engineering Students' Teamwork: Examining Boundary Processes

Canan Mesutoglu, Erasmus University Rotterdam, Netherlands; Dury Bayram-Jacobs, Eindhoven University of Technology, Netherlands; Annemieke Vennix, Eindhoven University of Technology, Netherlands; Jan van der Veen, Eindhoven University of Technology, Netherlands

Using interaction dynamics to study intra- and inter-team processes of team learning

Lida Zoi David, University of Twente, Netherlands; Marcella Hoogetboom, University of Twente, Netherlands; Maaïke Endendijk, University of Twente, Netherlands; Jan Maarten Schraagen, Netherlands Organisation for Applied Scientific Research (TNO), Netherlands

From decoration to documentantion: a collaborative action research at a Greek kindergarten.

Alexandra Gkloumpou, Aristotle University of Thessaloniki, Greece; DOMNA KAKANA, Aristotle University of Thessaloniki, Greece

The Importance of a Homogeneous Problem Perception for Successful Problem Regulation in CSCL

Laura Spang, University of Augsburg, Germany; Martin Greisel, University of Augsburg, Germany; Ingo Kollar, University of Augsburg, Germany

Session N: 18

Time: 14:45-16:15

Location: AUTH_DC1

SINGLE PAPER: CLASSROOM MANAGEMENT**Chair**

Emely Hoch, Leibniz-Institut für Wissensmedien, Germany

Teachers' classroom management competences at their entry into the teaching profession

Lena Hollenstein, University of Teacher Education St.Gallen, Switzerland; Christian Bruehwiler, University of Teacher Education St.Gallen, Switzerland; MANUELA HALDIMANN, University of Teacher Education St.Gallen, Switzerland; Doreen Holtsch, University of Teacher Education St.Gallen, Switzerland

Preservice Teachers' Lesson Planning Competence and Teaching Quality Regarding Classroom Management

Madeleine Müller, University Erfurt, Germany; Isabell Tucholka, TU Dortmund University, Germany

Professional Vision in the Classroom: Teachers' Knowledge-Based Reasoning and Visual Attention

Heli Muhonen, University of Jyväskylä, Finland; Eija Pakarinen, University of Jyväskylä, Finland; Marja-Kristiina Lerkkanen, University of Jyväskylä, Finland

Under Which Conditions Do Teachers Label Students as Having Behavior Problems?

Boris Eckstein, University of Teacher Education Zurich, Switzerland; Urs W. Grob, University of Zurich, Switzerland; Kurt Reusser, University of Zurich, Switzerland; Alexander Wettstein, PHBern / University of Bern, Switzerland

How Language Shapes Our Views: A Study of Work with Language Awareness in a Year 7 Class

Ingvill Rasmussen, University of Oslo, Norway; Kari Anne Rødnes, University of Oslo, Norway

Session N: 19

Time: 14:45-16:15

Location: AUTH_TE2

SINGLE PAPER: FEEDBACK IN HIGHER EDUCATION: PREDICTORS AND OUTCOMES**Chair**

Olga Chernikova, Ludwig Maximilian University, Germany

Do achievement goals and self-efficacy matter for students' perception and use of feedback?

Melanie V. Keller, University of Augsburg, Germany; Markus Dresel, University of Augsburg, Germany; Martin Daumiller, University of Augsburg, Germany

The Effects of Free-Selection Peer Feedback Activities on Self-Efficacy of University Students

Natasha Dmoshinskaia, University of Twente, Netherlands; Hannie Gijlers, University of Twente, Netherlands; Pantelis M. Papadopoulos, University of Twente, Netherlands; Alieke M. van Dijk, University of Twente, Netherlands

Unpacking Emotional and cognitive responses to feedback in teams

Catherine Gabelica, IESEG School of Management, France; Vitaliy Popov, University of Michigan, United States

What changed my mind – Impact of feedback in online-self-assessments for study choice orientation

Belinda Merkle, University of Mannheim, Germany; Hanna Buerkle, University of Mannheim, Germany; Karina Karst, University of Mannheim, Germany; Stefan Janke, University of Mannheim, Germany

Session N: 20

Time: 14:45-16:15

Location: AUTH_T202

SINGLE PAPER: EDUCATIONAL TECHNOLOGIES IN VOCATIONAL EDUCATION**Chair**

Stephan Vogel, University of Graz, Austria

Technology use in vocational education: Teachers' competence and beliefs, and school-related factors

Alberto Cattaneo, Swiss Federal University for Vocational Education and Training, Switzerland; Chiara Antonietti, Swiss Federal University for Vocational Education and Training (SFUVET), Switzerland

Stress-related psycho-physiological activation in emergency simulations using a 360° Video

Rita Cosoli, The Swiss Federal University for Vocational Education and Training (SFUVET), Switzerland; Francesca Amenduni, Swiss Federal University for Vocational Education and Training (SFUVET), Switzerland; Vito Candido, SFUVET, Switzerland; Alberto Cattaneo, Swiss Federal University for Vocational Education and Training, Switzerland

Fostering Virtual Teamwork – Shedding Light on Apprentices in VET using PLS-SEM

Frank Hiller, LMU Munich School of Management, Germany; Stefanie Zarnow, LMU Munich, Germany

S-EBPQ tool validation to measure EBP behaviours in nursing students during clinical internships

Anja Garone, University College Leuven Limburg, Belgium; Carla Quesada-Pallarès, Universitat Autònoma de Barcelona, Spain; Marlies Baeten, University College Leuven Limburg, Belgium

Session N: 21

Time: 14:45-16:15

Location: UOM_R08

SINGLE PAPER: SCHOOL LEADERSHIP**Chair**

Leena Paakkari, University of Jyväskylä, Faculty of Sport and Health Sciences, Finland

Key factors of effective professionalisation programmes for school leaders

Els Tanghe, University of Antwerp, Belgium; Wouter Schelfhout, University of Antwerp, Belgium

Leading the School Change: Leadership Patterns and Implementation of Best Pedagogical Practices

Irit Sasson, Tel-Hai College, Israel; Yael Grinshtain, Tel-Hai Academic College, Israel; Tamir Ayali, Tel-Hai Academic College, Israel; Itamar Yehuda, Tel Hai Academic College, Israel

Teachers' and principals' use of results from nationwide achievement tests: A mediation analysis

Patrick Hawlitschek, Institute for Educational Quality Improvement (IQB), Germany; Sofie Henschel, Institute for Educational Quality Improvement (IQB), Germany; Dirk Richter, University of Potsdam, Germany; Petra Stanat, Institute for Educational Quality Improvement (IQB), Germany

Emotional intelligence as game changer in school leadership: Notes from the Covid-19 pandemic.

Stella Jackman-Ryan, North Carolina State University, United States; Lisa Bass, North Carolina State University, United States; Mario Jackson, North Carolina State University, United States

Session N: 22

Time: 14:45-16:15

Location: UOM_A07

SINGLE PAPER: PRE-SERVICE TEACHERS' MOTIVATIONAL BELIEFS**Chair**

Charles Selorm Dzormeku, University of Turku, Finland

Brilliance Beliefs of German Pre-Service Teachers: A longitudinal analysis

Katharina Asbury, Leibniz Institute for Science and Mathematics Education (IPN), Germany; Bastian Carstensen, Leibniz Institute for Science and Mathematics Education (IPN), Germany; Uta Dr. Klusmann, Leibniz Institute for Science and Mathematics Education (IPN), Germany

Finnish pre-service science and primary teachers' motivations and perceptions of teaching

Antti Lehtinen, University of Jyväskylä, Finland; Tomi Jaakkola, Tampere University, Finland; Koen Veermans, University of Turku, Finland

Basic Needs Satisfaction During a Teaching Practicum: An Intraindividual Perspective

Mathias Dehne, Friedrich Schiller University Jena, Germany; Miriam Jähne, Friedrich-Schiller-University Jena, Germany; Susi Klab, Friedrich Schiller University Jena, Germany; Alexander Groeschner, Friedrich Schiller University Jena, Germany

Predicting student's basic needs through motivational appeals: Outcomes on grit and well-being

Elisa Santana Monagas, University of Las Palmas de Gran Canaria, Spain; Juan L. Núñez, University of Las Palmas de Gran Canaria - Faculty of Educational Sciences, Spain; Jaime León, Universidad de Las Palmas de Gran Canaria, Spain

Session N: 23

Time: 14:45-16:15

Location: AUTH_T102

SINGLE PAPER: READING AND WRITING IN A FOREIGN LANGUAGE**Chair**

Jean-Francois Rouet, University of Poitiers, France

The relationship between reading, spelling, writing fluency, and text quality

Eva Lindgren, Umeå University, Sweden; Christian Waldmann, Linnaeus University, Sweden; Maria Levlin, Umeå University, Sweden

How can feedback improve L1, L2, and FL learners' writing? A systematic review

Sina Scherer, Westfälische Wilhelms-Universität Münster, Germany; Steve Graham, Arizona State University, United States; Vera Busse, Westfälische Wilhelms-Universität Münster, Germany

EFL/ESL Teachers' and Students' Perceptions and Practices of Written Feedback: A Systematic Review

Abderrahim Mamad, University of Szeged, Doctoral School of Education, Hungary; Tibor Vigh, University of Szeged, Hungary

Investigating the Effects of Linguistic Distance on German and English Reading and Mathematics

Daria Ferencik-Lehmkuhl, University of Cologne, Germany; Nils Jaekel, University of Oulu, Finland; Michael Schurig, Technical University Dortmund, Germany; Sandra Schwinning, University of Wuppertal, Germany

Non-native pupil motivation in spoken English: learning English with an embodied phonology method

NATHALIE HUET, University of Toulouse 2, France; Marie-Hélène Hana Younan, University of Toulouse, France; Julie Rouaud, University of Paris-Sorbonne Nouvelle, PRISMES-SeSyliA, France; Victoria O'Callaghan, University of Toulouse 2, CLLE-UMR 5263 CNRS, France; Anne Przewozny, University of Toulouse 2, CLLE UMR 5263 CNRS, France

Session N: 24

Time: 14:45-16:15

Location: UOM_R02

POSTER PRESENTATION: WRITING AND LITERACY DEVELOPMENT

Chair

Jarkko Hautala, Niilo Mäki Institute, Finland

The Contributions of Executive Functioning to Handwritten and Keyboarded Compositions in Year 2

Deborah Pino-Pasternak, University of Canberra, Australia; Debora Valcan, Murdoch University, Australia; Anabela Malpique, Edith Cowan University, Australia; Timothy Teo, The Chinese University of Hong Kong, Hong Kong; Mustafa Asil, University of Otago, New Zealand

Identifying Negative Language Transfer in the English Writing of Chinese and Farsi Native Speakers

Maria Cutumisu, University of Alberta, Canada; Mohammad Karimiabdolmaleki, University of Alberta, Canada; Leticia Farias Wanderley, University of Alberta, Canada; Carrie Demmans Epp, University of Alberta, Canada

Modelling writing competence

Rebecca Kreuz, Universität zu Köln/ University of Cologne, Germany; Julie Philippek, Universität zu Köln/ University of Cologne, Germany; Ann-Kathrin Hennes, University of Cologne, Germany; Barbara Schmidt, University of Cologne, Germany; Alfred Schabmann, University of Cologne, Germany

Benefits of Image Interpretation Models on Adolescents' Historical Reasoning

Kevin van Loon, University of Applied Sciences Northwestern Switzerland FHNW School of Education, Switzerland; Monika Waldis, University of Applied Sciences Northwestern Switzerland, Switzerland

The promotion of writing strategies and the evaluation of the implementation process

Seda Yilmaz Würfel, TU Chemnitz, Germany; Simone Jambor-Fahlen, University of Cologne, Mercator Institute for Literacy and Language Education, Germany; Nora Fröhlich, Institute for Educational Analysis (IBBW), Germany; Benjamin Fauth, Institute for Educational Analysis (IBBW), Germany; Alexandra Dehmel, Institute for Educational Analysis (IBBW), Germany; Michael Becker-Mrotzek, University of Cologne, Mercator Institute for Literacy and Language Education, Germany

Writing-to-learn: Effects of writing compared to speaking on memory for text.

David Galbraith, University of Southampton, United Kingdom; Amy Peters, University of Southampton, United Kingdom; Roberto Limongi, University of Western Ontario, Canada

Session N: 25

Time: 14:45-16:15

Location: UOM_R03

POSTER PRESENTATION: (SELF-)ASSESSMENT METHODS

Chair

Ioannis Dimakos, University of Patras, Greece

Standardization of Metacognition in Creative Problem-Solving (MCPS) Scale

Kamila Urban, Institute for Research in Social Communication, Slovak Academy of Sciences, Slovakia; Marek Urban, Institute of Psychology of Czech Academy of Sciences, Czech Republic

Teaching Analysis Poll (TAP) in SQUARE: Insights into a Joint Practice and Research Project

Stefan T. Siegel, University of St.Gallen, Switzerland

Talking Transactivity: Various Perspectives and a Possible Direction for Automated Analysis

David Otten, University of Twente, Netherlands; Pantelis Papadopoulos, University of Twente, Netherlands; Maaïke Endendijk, University of Twente, Netherlands

Using students' interaction with self-assessments during the semester for predicting course success

Clara Schumacher, Humboldt Universität zu Berlin, Germany; Dirk Ifenthaler, University of Mannheim, Germany; Jakub Kuzilek, Humboldt Universität zu Berlin, Germany

Analysis of Creativity in Collaborative Writing Texts Using the T-CREANT Assessment Tool

Noemí Font-Piqué, University of Lleida, Spain; Manoli Pifarré Turmo, University of Lleida, Spain

Session N: 26

Time: 14:45-16:15

Location: UOM_R01

POSTER PRESENTATION: DIGITAL LITERACY, TEACHING AND TEACHER EDUCATION AND PROFESSIONAL DEVELOPMENT**Chair**

Päivi Hökkä, University of Tampere, Finland

Digital team collaboration in kindergartens: An investigation using the Will-Skill-Tool Model

Sebastian Then, University of Bamberg, Germany; Matthias Borgstede, Otto-Friedrich-University of Bamberg, Germany; Yvonne Anders, Otto-Friedrich-University of Bamberg, Germany

Exploring the intentions and digital competence of pre-service primary school teachers in Ireland

Denis Moynihan, Dublin City University, Ireland

Teachers' digital competence - a broad set of comprehensive attitudes, skills, and knowledge

Susanna Pöntinen, University of Eastern Finland, Finland; Sini Kontkanen, University of Eastern Finland, Finland; Sinikka Rätty-Záborszky, University of Eastern Finland, Finland; Mira Kummunmäki, University of Eastern Finland, Finland

Effects of an ICT course on pre-service teachers' self-efficacy: A quasi-experimental study

Sonja Hahn, Darmstadt University of Applied Sciences, Germany; Samuel Merk, PH Karlsruhe, Germany; Olga Kunina-Habenicht, Technical University of Dortmund, Germany

The effectiveness of long-term in-service training on teachers' professional development

Sini Kontkanen, University of Eastern Finland, Finland; Susanna Pöntinen, University of Eastern Finland, Finland; Satu Piispa-Hakala, University of Eastern Finland, Finland

What do we do when we simulate? - a design-based research study

Sonja Bleymehl, Pädagogische Hochschule Ludwigsburg, Germany; Christine Bescherer, Pädagogische Hochschule Ludwigsburg, Germany

Session N: 27

Time: 14:45-16:15

Location: UOM_GYM

ROUNDTABLE: FEEDBACK AND ASSESSMENT**Chair**

Aleksandra Huic, Faculty of Humanities and Social Sciences, University of Zagreb, Croatia

The effects of standardized and individualized feedback on self-efficacy and anxiety in writing

Katrin Peltzer, Westfälische Wilhelms-Universität Münster (Münster University), Germany; Alina Lira Lorca, Department of Educational Sciences, Oldenburg University, Germany; Ulrike-Marie Krause, University of Oldenburg, Germany; Vera Busse, Westfälische Wilhelms-Universität Münster, Germany

A valid and reliable assessment tool of competencies in higher education

Kris Janssens, Hasselt University, Belgium; Annelies Vanheel, Hasselt University, Belgium; Bert Brône, Hasselt University, Belgium

The influence of item design on test performance

Tamara Schleepen, Open Universiteit, Department of Online Learning and Instruction, Netherlands; Desirée Joosten-ten Brinke, Open University of the Netherlands, Netherlands

Automated Feedback and Learning Design for Collaborative Problem Solving in Simulation Scenarios

Daniel Sanchez, University of Oslo, Norway; Rachelle Esterhazy, University of Oslo, Norway; Crina Damsa, University of Oslo, Norway

Session N: 28

Time: 14:45-16:15

Location: UOM_R09

ICT DEMONSTRATION: A DEMONSTRATION AND TUTORIAL OF OPEN CREATIVITY SCORING: FREWARE FOR EDUCATIONAL RESEARCHERS**A Demonstration and Tutorial of Open Creativity Scoring: Freeware for Educational Researchers**

Denis Dumas, University of Georgia, United States; Peter Organisciak, University of Denver, United States; Selcuk Acar, University of North Texas, United States

Session O: 1

Time: 17:00-18:30

Location: HELEXPO_CC

INVITED SYMPOSIUM: INTENSIVE LONGITUDINAL METHODS – THE WAY FORWARD IN RESEARCHING PROFESSIONAL LEARNING**Chair**

Michael Goller, University of Kassel, Germany

Organisers

Michael Goller, University of Kassel, Germany; Maaïke Endedijk, University of Twente, Netherlands; Andreas Rausch, University of Mannheim, Germany

Discussant

Littlejohn Allison, University College London, United Kingdom

Time for change: The promises of intensive longitudinal methods for the field of workplace learning

Maaïke Endedijk, University of Twente, Netherlands

Autonomy, emotions, arousal and development of competence in daily work situations

Petri Nokelainen, Tampere University, Finland; Ilmari Puhakka, Tampere University, Finland; Eija Lehtonen, Tampere University, Finland

Two microgenetic studies on teacher learning: Investigating learning in process

Alba Vallés, University of Lleida, Spain; Marc Clarà, University of Lleida, Spain

Replicating and extending a diary study on emotions, coping and learning in error situations at work

Andreas Rausch, University of Mannheim, Germany

ANNOTATIONS:
SIG 14 INVITED SYMPOSIUM

Session O: 2

Time: 17:00-18:30

Location: UOM_CH

INVITED SYMPOSIUM: FUNDAMENTAL ACADEMIC LEARNING IN STUDENTS WITH VARIOUS EDUCATIONAL NEEDS - LONGITUDINAL EVIDENCE**Chair**

Pirjo Aunio, University of Helsinki, Finland

Organiser

Pirjo Aunio, University of Helsinki, Finland

Discussant

Kerry Lee, The Education University of Hong Kong, Hong Kong

The Cognitive Profile of Preschoolers at Risk for Dyslexia and ADHD

Silke Kellens, Katholieke Universiteit Leuven, Belgium; Dieter Baeyens, KU Leuven, Belgium; Pol Ghesquière, KU Leuven, Belgium

Linguistic Precursors of Advanced Math Growth in Children with and without DLD

Eliane Segers, Radboud University, Netherlands; Constance Vissers, Radboud University, Netherlands; Tijs Kleemans, Radboud University, Netherlands

Developmental trajectories of math anxiety and performance in lower secondary education

Johan Korhonen, Åbo Akademi University, Finland; Anna Widlund, Åbo Akademi University, Finland; Pekka Räsänen, University of Turku, Finland

Mathematical Abilities in Williams syndrome: Longitudinal findings from the WisDom Database

Jo Van Herwegen, UCL Institute of Education, United Kingdom; Stella Xu, UCL- Institute of Education, United Kingdom; Harry Purser, The Nottingham Trent University, United Kingdom; Michael Thomas, Birkbeck College, University of London, United Kingdom

ANNOTATIONS:
SIG 15 INVITED SYMPOSIUM

Session O: 3

Time: 17:00-18:30

Location: AUTH_CH

INVITED SYMPOSIUM: SOCIAL SUSTAINABILITY EFFORTS AND LEARNING EXPERIENCES IN DIVERSE AND MULTICULTURAL PRACTICES**Chairs**

Gudrun Ziegler, Ministère de l'éducation nationale / Luxembourg multi-LEARN Institute, Luxembourg; Andreas Gegenfurtner, University of Augsburg, Germany

Organiser

Maria Bäcke, University of Jönköping, School of Education and Communication, Sweden

Discussant

Sikunder Ali, Norwegian University of Science and Technology (NTNU), Norway

Individualising Swedish for Immigrants: Tensions and innovations in teachers' professional practice

Dimitrios Papadopoulos, University of Gothenburg, Sweden

Transmedia Educommunication Method for Social Sustainability

Maria Bäcke, University of Jönköping, School of Education and Communication, Sweden; Renira Gambarato, Jönköping University, Sweden; Lorena Tárca, Centro Universitário de Belo Horizonte, Brazil; Geane Alzamora, Universidade Federal de Minas Gerais, Brazil; Leo Cunha, Puc-MG, Brazil

Invisible and unrecognised global citizenship and diversity among students at upper secondary level

Maria Bäcke, University of Jönköping, School of Education and Communication, Sweden; Sylvi Vigmo, University of Gothenburg, Sweden

Reading for pleasure and reading for school – Student agency vs normative curricula

Sylvi Vigmo, University of Gothenburg, Sweden; Maria Bäcke, University of Jönköping, School of Education and Communication, Sweden

ANNOTATIONS:
SIG 21 INVITED SYMPOSIUM

Session O: 4

Time: 17:00-18:30

Location: AUTH_DC3

SYMPOSIUM: UNDERSTANDING TEACHING QUALITY IN THE NORDIC CONTEXT USING A SHARED OBSERVATION SYSTEM**Chair**

Kirsti Klette, University of Oslo, Norway

Organiser

Mark White, University of Oslo, Norway

Discussant

Pamela Grossman, University of Pennsylvania, United States

Observation manuals as lenses into classroom teaching – towards a common language of instruction?

Kirsti Klette, University of Oslo, Norway; Astrid Roe, University of Oslo, Faculty of Education, Norway; Marte Blikstad-Balas, University of Oslo, Norway; Mark White, University of Oslo, Norway; Michael Tengberg, Karlstad University, Sweden

Stated Purpose and Feedback practices in Icelandic classrooms: Results from a video study

Berglind Gísladóttir, University of Iceland School of Education, Iceland; Birna María Svanbjörnsdóttir, University of Akureyri, Iceland; Sólveig Zophoníasdóttir, University of Akureyri, Iceland

Features of language arts classrooms with high-level classroom discourse across Nordic contexts

Camilla Magnusson, University of Oslo, Norway; Kirsti Klette, University of Oslo, Norway; Jennifer Luoto, University of Oslo, Norway; Marte Blikstad-Balas, University of Oslo, Norway

Characteristics of cognitively activating Nordic mathematics classrooms

Jóhann Örn Sigurjónsson, University of Akureyri, Iceland; Alexander Selling, ILS, University of Oslo, Norway

Session O: 5

Time: 17:00-18:30

Location: AUTH_DC2

SYMPOSIUM: (INTELLIGENT) TUTORING SYSTEMS AND THEIR AFFORDANCES AS A RESEARCH TOOL FROM MULTIPLE PERSPECTIVES**Chairs**

Cora Parrisius, University of Education Karlsruhe, Germany; Hannah Deininger, University of Tübingen, Germany

Discussant

Vincent Alevan, Carnegie Mellon University, United States

Analyzing Behavioral Trace Data with Machine Learning and Explainable AI to Predict Learning Success

Hannah Deininger, University of Tübingen, Germany; Cora Parrisius, University of Education Karlsruhe, Germany; Leona Colling, University of Tübingen, Germany; Ines Pieronczyk, University of Tübingen, Germany; Detmar Meurers, University of Tübingen, Germany; Ulrich Trautwein, University of Tübingen, Germany; Benjamin Nagengast, Eberhard Karls Universität Tübingen, Germany; Gjergji Kasneci, University of Tübingen, Germany

Effective Features of Feedback in an Intelligent Tutoring System: A Randomized Controlled Trial

Cora Parrisius, University of Education Karlsruhe, Germany; Katharina Wendebourg, University of Tübingen, Germany; Sven Rieger, University of Tübingen, Germany; Ines Loll, University of Trier, Germany; Diana Pili-Moss, Leuphana University Lüneburg, Germany; Leona Colling, University of Tübingen, Germany; Carolyn Blume, TU Dortmund University, Germany; Ines Pieronczyk, University of Tübingen, Germany; Heiko Holz, Novatec Consulting GmbH, Germany; Stephen Bodnar, University of Tübingen, Germany; Torben Schmidt, Leuphana University Lüneburg, Germany; Ulrich Trautwein, University of Tübingen, Germany; Detmar Meurers, University of Tübingen, Germany; Benjamin Nagengast, Eberhard Karls Universität Tübingen, Germany

The Effect of Career-Personalized Mathematics Instruction on Students' Learning and Interests

Matthew Bernacki, University of North Carolina at Chapel Hill, United States; Candace Walkington, Southern Methodist University, United States; Vanessa Vongkulluksn, University of Nevada, Las Vegas, United States; Meghan J. Greene, University of North Carolina at Chapel Hill, United States; Taylor Darwin, Texas Tech University, United States; Brooke Iestas, Southern Methodist University, United States; Elizabeth Leyva, Texas A&M University - San Antonio, United States

Adaptive Learning Technologies and Dashboards as an Instrumentation Tool to Study Teachers

Inge Molenaar, Radboud University Nijmegen, Netherlands; Carolien A. N. Knoop-van Campen, Radboud University Nijmegen, Netherlands

Session O: 6

Time: 17:00-18:30

Location: UOM_A02

SYMPOSIUM: TEACHER-STUDENT RELATIONSHIPS IN EDUCATION—WHAT WE KNOW AND WHAT WE DON'T (YET) KNOW**Chair**

Valentin Emslander, University of Luxembourg, Luxembourg

Discussant

Hinke Endedijk, Leiden University, Netherlands

CANCELLED: A Systematic Review of Studies Examining School Climate and Student Outcomes

Nani Teig, University of Oslo, Norway; Trude Nilsen, University of Oslo, Norway

Reviewing Meta-Analyses on the Link Between Teacher-Student Relationships and Student Outcomes

Valentin Emslander, University of Luxembourg, Luxembourg; Doris Holzberger, Technical University of Munich (TUM) & ZIB (Centre for International Student Assessment), Germany; Antoine Fischbach, Luxembourg Centre for Educational Testing, Luxembourg; Ronny Scherer, University of Oslo, Norway

Student-Teacher Relationship Trajectories and Secondary Students' School Engagement

Debora Roorda, University of Amsterdam, Netherlands; Rianne Bosman, University of Amsterdam, Netherlands

Teacher Support and Student Participation: Generalizability across Students and Subjects

Simon Munk, Technical University of Munich, Germany; Ricardo Böheim, Technical University of Munich, Germany; Doris Holzberger, Technical University of Munich (TUM) & ZIB (Centre for International Student Assessment), Germany

Session O: 7

Time: 17:00-18:30

Location: UOM_A03

SYMPOSIUM: CHILDREN'S SPATIAL SKILLS: RELATIONS TO COGNITIVE DEVELOPMENT AND EDUCATIONAL IMPLICATIONS**Chair**

Anke Maria Weber, University of Luxembourg, Luxembourg

Organiser

Anke Maria Weber, University of Luxembourg, Luxembourg

Discussant

Samuel Greiff, University of Luxembourg, Luxembourg

The use of search strategy improves with age and visuospatial working memory in 2- to 4-year-olds

Katarzyna Bobrowicz, University of Luxembourg, FLSHASE, Luxembourg; Anke Maria Weber, University of Luxembourg, Luxembourg; Samuel Greiff, University of Luxembourg, Luxembourg

Young children's mental rotation and the relation with fluid intelligence, block play, and gender

Anke Maria Weber, University of Luxembourg, Luxembourg; Katarzyna Bobrowicz, University of Luxembourg, FLSHASE, Luxembourg; Miriam Leuchter, RPTU Landau, Germany; Samuel Greiff, University of Luxembourg, Luxembourg

Mental rotation and mathematics: A closer look at relations in primary school children

Wenke Möhring, University of Basel, Switzerland; Léonie Moll, University of Basel, Switzerland; Marta Szewczyk, The John Paul II Catholic University of Lublin, Poland; Madga Szubielska, The John Paul II Catholic University of Lublin, Poland

Domain-general and domain-specific competencies in children's spatial problem-solving

Jonas Schäfer, University Kaiserslautern-Landau (RPTU), Germany; Timo Reuter, Rheinland-Pfälzische Technische Universität Kaiserslautern - Landau, Germany; Julia Karbach, University of Koblenz-Landau, Germany; Miriam Leuchter, RPTU Landau, Germany

Session O: 8

Time: 17:00-18:30

Location: AUTH_T002

SYMPOSIUM: ADVANCING SELF-REGULATED LEARNING RESEARCH WITH AI: IMPLICATIONS FROM MULTIMODAL TRACE STUDIES**Chair**

Roger Azevedo, University of Central Florida, United States

Organiser

Maria Bannert, Technical University of Munich (TUM), Germany

Discussant

Jeff Greene, university of north carolina at chapel hill, United States

Emotional Synchrony through Regulatory Triggers in Collaborative Learning

Andy (Khanh Xuan) Nguyen, University of Oulu, Finland; Sanna Järvelä, University of Oulu, Finland; Yante Li, University of Oulu, Finland; Yang Liu, University of Oulu, Finland; Eija Vuorenmaa, University of Oulu, Finland, Finland; Ahsen Çini, University of Oulu, Finland; Guoying Zhao, University of Oulu, Finland

Measuring and understanding self-regulated learning with digital trace data

Joni Lämsä, University of Oulu, Finland; Susanne de Mooij, Radboud University, Netherlands; Olli Aksela, University of Oulu, Finland; Inti Bistolfi, Radboud University Nijmegen, Netherlands; Inge Molenaar, Radboud University, Netherlands; Sanna Järvelä, University of Oulu, Finland

Investigating How Real-Time Personalized Scaffolds Influence Self-Regulated Learning Processes

Lyn Lim, Technical University of Munich, Germany; Maria Bannert, Technical University of Munich (TUM), Germany; Joep van der Graaf, Radboud University, Netherlands; Yizhou Fan, Peking University, China; Mladen Raković, Monash University, Australia; Shaveen Singh, Monash University, Australia; Inge Molenaar, Radboud University, Netherlands; Johanna Moore, University of Edinburgh, United Kingdom; Dragan Gasevic, Monash University, Australia

Using Multimodal Data to Examine Self-regulated Learning Sequences during Game-based Learning

Daryn Dever, University of Central Florida, United States; Nathan Sonnenfeld, University of Central Florida, United States; Megan Wiedbusch, University of Central Florida, United States; Roger Azevedo, University of Central Florida, United States

Session O: 9

Time: 17:00-18:30

Location: UOM_R05

SINGLE PAPER: MATHEMATICS: FRACTIONS KNOWLEDGE**Chair**

Emmanuel Manalo, Kyoto University, Japan

Examining the relation between algebra and different aspects of fraction knowledge

Jo Van Hoof, University of Turku, Finland; Jake McMullen, University of Turku, Finland

Cognitive activation within a dynamic learning environment and developing a basic fraction concept

Rowena Merkel, University of Education Freiburg, Germany; Katharina Loibl, University of Education Freiburg, Germany; Timo Leuders, University of Education Freiburg, Germany; Frank Reinhold, University of Education Freiburg, Germany

Adaptive teaching with fractions: a mixed method study

Sara Becker, Freiburg University of Education, Germany; Andreas Obersteiner, Technical University of Munich, Germany; Anika Dreher, Freiburg University of Education, Germany

Session O: 10

Time: 17:00-18:30

Location: UOM_A07

SINGLE PAPER: VIDEO-BASED LEARNING ACTIVITIES FOR TEACHERS**Chair**

Panagiotis Varsamis, University of Macedonia, Greece

Effects of multiple video-based coachings on teachers' facilitation of dialogic classroom discourse

Matthias Zimmermann, University of Teacher Education St.Gallen, Switzerland; Miriam Moser, University of Fribourg, Switzerland; Kurt Reusser, University of Zurich, Switzerland; Christine Pauli, University of Fribourg, Switzerland

The Power of Framing: Support Teachers to Shift to Dialogic Discourse via Mixed-Reality Simulation

Rupert Wegerif, University of Cambridge, United Kingdom; Lydia Cao, Harvard University, United States; Sara Hennessy, University of Cambridge, United Kingdom

Video-based Evaluations of Cognitive Activation: An Explorative Study in Science Teacher Education

Benjamin Heinitz, Leibniz University Hannover, Germany; Andreas Nehring, Gottfried Wilhelm Leibniz Universität Hannover, Germany

The role of cooperative activities for differentiated instruction

Robbert Smit, University of Teacher Education St.Gallen, Switzerland; Alexandra Taras, University of Teacher Education St.Gallen, Switzerland

Session O: 11

Time: 17:00-18:30

Location: UOM_A13

SINGLE PAPER: ARGUMENTATION AND REASONING**Chair**

Monika Nerland, University of Oslo, Norway

Students' use of connectives in argumentative writing – Which aspects of family background matter?

Elisabeth Mundt, University of Kassel, Germany; Madeleine Domenech, University of Kassel, Germany

Measuring students' argumentation skills: validation of a test instrument

Yvonne Berkle, University of Koblenz - Landau, Germany; Andreas Janson, University of Kassel, Germany; Thiemo Wambsganß, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland; Denise Löfflad, University of Kassel, Germany; Jan Marco Leimeister, University of Kassel, Germany; Miriam Leuchter, RPTU Landau, Germany

Noticing Confirmation Bias and Emphasizing Scientific Reasoning During Modeling

Amanda Cottone, University of Pennsylvania, United States; Susan Yoon, University of Pennsylvania, United States; Clark Chinn, Rutgers University, United States; Noora Noushad, University of Pennsylvania, United States; Huma Hussain-Abidi, Rutgers University Graduate School of Education, United States; Thomas Richman, University of Pennsylvania, United States

The Multiplicity, Adaptability, and Orientation of Teachers' Noticing of Proof-related Reasoning

Mei Yang, University of Cambridge, China

Session O: 12

Time: 17:00-18:30

Location: AUTH_TE2

SINGLE PAPER: TEACHERS' DIGITAL LITERACY AND LEARNING**Chair**

Ilona Friso-van den Bos, University of Twente, Netherlands

Didactical Design Dice - a meta-knowledge framework for (re)designing technology-mediated education

Sylvana Sofkova Hashemi, University of Gothenburg, Sweden; Maria Spante, School of Business, Economics and IT Division of Informatics, Sweden

Digital multimodal teaching and assessment: developing teachers' knowledge and competence

Petra Magnusson, Kristianstad University, Sweden; Sylvana Sofkova Hashemi, University of Gothenburg, Sweden

Remote digital assessment – variations in teachers' experiences

Ida Naimi-Akbar, KTH Royal Institute of Technology, Sweden

The discrepancy in the technology integration: teachers seek short-term, students long-term goals

Doris Kristina Raave, University of Tartu, Estonia; Eric Roldan Roa, Center for Scalable Data Analytics and Artificial Intelligence, Germany; Margus Pedaste, University of Tartu, Estonia; Katrin Saks, University of Tartu, Estonia

Session O: 13

Time: 17:00-18:30

Location: UOM_R08

SINGLE PAPER: TEACHER PROFESSIONAL DEVELOPMENT**Chair**

Ana Paula S. Loures-Elias, Interdependent Researcher, Portugal

Teachers' profiles of content knowledge, motivational and emotional orientations in statistics

Sarah Huber, Technical University of Munich, Germany; Frank Reinhold, University of Education Freiburg, Germany; Andreas Obersteiner, Technical University of Munich, Germany; Kristina Reiss, Technische Universität München (TUM), Germany

Efficacy of induction elements on the development of beginning teachers' qualities

Xiangyuan Feng, University of Groningen, Netherlands; Michelle Helms-Lorenz, University of Groningen, Netherlands; Ridwan Maulana, GION - University of Groningen, Netherlands

Teachers' awareness of the generalising potential of school assignments

Birgit Vogt, University of Koblenz, Germany; Markus Linnemann, University of Koblenz, Germany

A positive impact of a PBL-based online course: A multidimensional model of identity construction

Yulia Muchnik-Rozanov, Technion - Israel Institute of Technology, Achva Academic College, Israel; Dina Tsybulsky, Technion - Israel Institute of Technology, Israel

Session O: 14

Time: 17:00-18:30

Location: AUTH_T202

SINGLE PAPER: READING: COGNITIVE PROCESSES AND SKILLS**Chair**

Marielle Wittelings, Behavioural Science Institute, Radboud University Nijmegen, Netherlands

Reading from Paper, Computers, and Tablets in First Grade: The Role of Comprehension Monitoring

Elena Florit, University of Verona, Italy; Pietro De Carli, University of Milano-Bicocca, Italy; Kate Cain, Lancaster University, United Kingdom; Lucia Mason, University of Padova, Italy

Reciprocal relations between morphological awareness and literacy among Greek Cypriot children

Evdokia Pittas, University of Nicosia, Cyprus; Terezinha Nunes, University of Oxford, United Kingdom

The role of task models and goal management in 6th graders' online reading strategies.

Jean-Francois Rouet, University of Poitiers, France; Yann Dyoniziak, CeRCA UMR7295 Université de poitiers, France; Mónica Macedo-Rouet, CY Cergy Paris Université, France; Émilie Dujardin, Université de Poitiers, France; Anna Potocki, Université Grenoble Alpes, France

Compensation in children with (a risk of) reading difficulties: A scoping review

Sanne Appels, University Utrecht, Netherlands; Sietske van Viersen, Utrecht University, Netherlands; Lisette Hornstra, Utrecht University, Netherlands; Sara van Erp, Utrecht University, Netherlands; Elise de Bree, Utrecht University, Netherlands

Session O: 15

Time: 17:00-18:30

Location: AUTH_DC1

SINGLE PAPER: TEACHERS' JOB SATISFACTION AND WELL-BEING**Chair**

Nienke Smit, Utrecht University, Netherlands

Satisfied and High Performing? A Meta-Analysis on the Correlates of Teachers' Job Satisfaction

Gyde Wartenberg, IPN - Leibniz Institute for Science and Mathematics Education, Germany; Karen Aldrup, IPN - Leibniz Institute for Science and Mathematics Education, Kiel, Germany; Simon Grund, University of Hamburg, Germany; Uta Klusmann, IPN - Leibniz Institute for Science and Mathematics Education, Kiel, Germany

Teachers' Occupational Well-Being in Relation to Teacher-Student Interactions

Sze Wah Chan, University of Jyväskylä, Finland; Sanni Pöysä, University of Jyväskylä, Finland; Marja-Kristiina Lerkkanen, University of Jyväskylä, Finland; Eija Pakarinen, University of Jyväskylä, Finland

Investigating the interplay of teachers' emotions, subjective well-being, and daily work situations

Tanja Bross, Augsburg University, Germany; Ulrike Nett, Augsburg University, Germany

The impact of working time in the teaching profession: A systematic literature review

Carmela Aprea, University of Mannheim, Germany

Session O: 16

Time: 17:00-18:30

Location: UOM_A08

SINGLE PAPER: SELF-REGULATED LEARNING AND BEHAVIOUR**Chair**

Sabrina Gerth, University College of Teacher Education Tyrol, Austria

Student engagement and self-regulation in adolescence: A within-person reciprocal relation

Kristján Ketill Stefánsson, University of Iceland, Iceland; Steinunn Gestsdóttir, University of Iceland, Iceland; Freyja Birgisdóttir, University of Iceland, Iceland

“Don't Chat in Class!": Self-regulated School Engagement Profiles and Academic Achievement

Ioannis Katsantonis, University of Cambridge, United Kingdom

The Effect of Generalised and Personalised Scaffolds on Self-Regulated Learning

Joep van der Graaf, Radboud University Nijmegen, Netherlands; Lyn Lim, Technical University of Munich, Germany; Yizhou Fan, Peking University, China; Shaveen Singh, Monash University, Australia; Mladen Raković, Monash University, Australia; Johanna Moore, University of Edinburgh, United Kingdom; Dragan Gasavic, Monash University, Australia; Maria Bannert, Technical University of Munich (TUM), Germany; Inge Molenaar, Radboud University Nijmegen, Netherlands

Approaches to learning and self-regulation strategies among Chilean higher education students

Carlos González, Pontificia Universidad Católica de Chile, Chile; Juan Pedro Ross, Universidad de Chile, Chile

ANNOTATIONS:

PLEASE NOTE THAT THIS SESSION ROOM HAS CHANGED FROM AUTH_TE1 TO UOM_A08.

Session O: 17

Time: 17:00-18:30

Location: AUTH_T102

SINGLE PAPER: CONCEPTUAL CHANGE AND EPISTEMIC BELIEFS**Chair**

Fotini Polychroni, NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS, Greece

Relation of conceptual understanding and epistemic beliefs in biology: A person oriented approach

Vesta Aleknavičiūtė, Vytautas Magnus University, Lithuania; Ilona Södervik, University of Helsinki, Finland; Erno Lehtinen, University of Turku, Finland; Jake McMullen, University of Turku, Finland

A Comprehensive Validation Study of an Instrument for Measuring Epistemic Beliefs

Belinda Berweger, Friedrich-Schiller-University Jena, Germany; Florentine Diersch, Friedrich-Schiller-University Jena, Germany; Baerbel Kracke, University of Jena, Germany; Julia Dietrich, Friedrich-Schiller-University Jena, Germany

R- and P-epistemic beliefs – On the inter- and intraindividual structure of epistemic beliefs

Eric Klopp, Saarland University, Germany; Robin Stark, Saarland University, Germany

The Study of Conceptual Change and the Diffusion of Knowledge across Disciplinary boundaries

Gregg Solomon, National Science Foundation, United States

Session O: 18

Time: 17:00-18:30

Location: UOM_R09

SINGLE PAPER: MENTORING AND COACHING OF EARLY CAREER TEACHERS**Chair**

Jelena Radisic, University of Oslo, Norway

University and school-based support for teachers in career entry

Anja Winkler, University of Teacher Education Bern, Switzerland; Daniela Freisler, Pädagogische Hochschule, Institut Forschung & Entwicklung, Bern, Switzerland

Novice teachers' sense of professional identity explored through portrait methodology

Ella AIT-ZAOUIT, Fontys University of Applied Sciences, Netherlands

A systematic review of research on field practicum and professional identity development

Elaine Munthe, University of Stavanger, Norway

What themes do preservice teachers focus on in peer coaching dialogues? Results of a pilot study.

Bettina Gautel, Gottfried Wilhelm Leibniz Universität Hannover, Germany; Katharina Mueller, Leibniz University Hannover, Germany

Session O: 19

Time: 17:00-18:30

Location: UOM_A06

SINGLE PAPER: PREDICTING ACHIEVEMENT AND MOTIVATION

Chair

Winnie-Karen Giera, Institute of German Studies, University of Potsdam, Germany

PISA Reading Achievement, Literacy Motivation and School Burnout Predicting Educational Outcomes

Kati Vasalampi, University of Jyväskylä, Finland; Asko Tolvanen, University of Jyväskylä, Finland; Minna Torppa, University of Jyväskylä, Finland; Anna-Maija Poikkeus, University of Jyväskylä, Finland; Kaisa Aunola, University of Jyväskylä, Finland

How Does Studying Latin in Secondary Education Predict Study Achievement in Higher Education?

Cathy Hauspie, Ghent University, Belgium; Stijn Schelfhout, Ghent University, Belgium; Nicolas Dirix, Ghent University, Belgium; Lot Fonteyne, Ghent University, Belgium; Mark Janse, Ghent University, Belgium; Arnaud Szmalec, Université catholique de Louvain (UCL), Belgium; Alexandra Vereeck, Universiteit Gent, Belgium; Wouter Duyck, Ghent University, Belgium

English Media Use Predicts Skill and Motivation Development in English as a Foreign Language

Jennifer Meyer, Leibniz Institute for Science and Mathematics Education (IPN), Germany; Johanna Fleckenstein, University of Hildesheim, Germany; Maleika Krüger, University of Potsdam, Germany; Stefan Keller, Zürich University of Teacher Education, Switzerland; Nicolas Hübner, University of Tübingen, Germany

Does the use of ICT at school predict lower PISA scores or vice versa?

Nestori Kilpi, Tampere University, Finland; Ninja Hienonen, Tampere University, Finland; Mari-Pauliina Vainikainen, Tampere University, Finland

Session O: 20

Time: 17:00-18:30

Location: UOM_A10

SINGLE PAPER: ASPECTS OF HEALTHCARE EDUCATION

Chair

Javier Fernández, Universidad de Leon, Spain

Measuring communication competence of medical students: Validation of a situational judgment test

Sabine Reiser, University of Erfurt, Germany; Laura Schacht, University of Erfurt, Germany; Eva Thomm, University of Erfurt, Germany; Kristina Schick, Technical University of Munich, Germany; Pascal Berberat, TUM Medical Education Center, Germany; Martin Gartmeier, Technical University of Munich (TUM), Germany; Johannes Bauer, University of Erfurt, Germany

“Am I being observed?”: Medical students’ perceptions about remote proctoring

Vasiliki Andreou, KU LEUVEN, Belgium; Sanne Peters, University of Melbourne, Australia; Jan Eggermont, KU LEUVEN, Belgium; Birgitte Schoenmakers, KU LEUVEN, Belgium

Context factors affecting experienced agency to engage in interprofessional feedback dialogues

Marije Lesterhuis, UMC Utrecht, Netherlands; Marijke Eurelings, Spaarne Gasthuis, Netherlands; Marieke van der Schaaf, University Medical Center Utrecht / Utrecht University, Netherlands; Reinier Hoff, University Medical Center Utrecht, Netherlands

The impact of paediatric public health degree programs: hope for South Africa.

Danica Sims, University of the Western Cape, South Africa; Anthony Westwood, University of Cape Town, South Africa; Jawaya Shea, University of Cape Town, South Africa

Session O: 21

Time: 17:00-18:30

Location: UOM_A05

SINGLE PAPER: REMOTE LEARNING AND EVALUATION IN HIGHER EDUCATION

Chair

Hanke Korpershoek, University of Groningen, Netherlands

Students’ experiences of remote online exams at a distance learning university

Simon Cross, The Open University, United Kingdom; Maria Aristeidou, Institute of Educational Technology/The Open University, United Kingdom; Klaus-Dieter Rossade, The Open University, United Kingdom; Carlton Wood, The Open University, United Kingdom

Reducing cheating behavior in online exams by considering students’ needs, conceptions, and reasons

Marco Rüdth, University of Cologne, Germany; Maria Jansen, University of Cologne, Germany; Kai Kaspar, University of Cologne, Germany

Using a conversational agent to support goal setting amongst higher education students

Gabrielle Martins Van Jaarsveld, Erasmus University Rotterdam, Netherlands; Jacqueline Wong, Utrecht University, Netherlands; Martine Baars, Erasmus University Rotterdam, Netherlands; Marcus Specht, TU Delft, Netherlands; Fred Paas, Erasmus University Rotterdam/University of Wollongong, Netherlands

Back to face-to-face teaching and learning: I (don’t) want to!

Elisabeth Seethaler, Pädagogische Hochschule Salzburg, Austria; Julia Klug, PH Salzburg, Austria

Session O: 22

Time: 17:00-18:30

Location: UOM_CR

SINGLE PAPER: LARGE-SCALE ASSESSMENTS OF MATHEMATICS AND NUMERACY**Chair**

Jolien Mouw, University of Groningen, Faculty of Behavioural and Social Sciences, GION Education/Research, Netherlands

Learning Aids' Effect on Mathematics in Grade 8 of Vocational Education in Flanders (Belgium)

Margo Vandembroeck, KU LEUVEN (BE 0419.052.173), Belgium; Jonas Dockx, KU LEUVEN, Belgium; Rianne Janssen, KU LEUVEN, Belgium

Not Adding It Up: Grade 1 mathematics outcomes in two South African provinces

Irene Pampallis, University of the Witwatersrand, South Africa; Nic Spaul, Stellenbosch University, South Africa; Cally Ardington, University of Cape Town, South Africa; Ingrid Sapire, University of the Witwatersrand, South Africa; Permie Isaac, Funda Wande, South Africa

Time on task in 9th grade low-stakes and high-stakes Math assessment

Janica Vinni-Laakso, University of Helsinki, Finland; Risto Hotulainen, University of Helsinki, Finland; Sirku Kupiainen, University of Helsinki, Finland

What explains the performance gap in mathematics between native and immigrant students in Finland?

Faruk Nazeri, Tampere University, Finland; Mari-Pauliina Vainikainen, Tampere University, Finland

Session O: 23

Time: 17:00-18:30

Location: UOM_A04

SINGLE PAPER: METACOGNITIVE PROCESSES AND SELF-REGULATED LEARNING IN TEXT COMPREHENSION**Chair**

Yiannis Georgiou, Cyprus University of Technology, Cyprus

A Comparison Between Rereading and Reading of Multiple Texts

Peter Seban, Czech Academy of Sciences, Slovakia; Kamila Urban, Institute for Research in Social Communication, Slovak Academy of Sciences, Slovakia; Radovan Šikl, Institute of Psychology, Czech Academy of Sciences, Czech Republic

The Role of Headings for Self-Regulated Learning From Texts

Anja Prinz-Weiß, University of Education Karlsruhe, Germany; Aline König, University of Education Freiburg, Germany

Do E-book interventions help promote near-transfer in first-grade students?

GILA DUSHNITZKY, Talpiot College of Education, Israel; Adina Shamir, Faculty of Education, Bar-Ilan University, Israel

Improving Monitoring Accuracy and Text Comprehension: Effects of Delayed and Immediate Diagramming

Sophia Braumann, University Utrecht, Netherlands; Margot van Wermeskerken, Utrecht University, Netherlands; Héctor J. Pijera-Díaz, Maastricht University, Netherlands; Janneke van de Pol, Utrecht University, Netherlands; Anique de Bruin, Maastricht University, Netherlands; Tamara Van Gog, Utrecht University, Netherlands

Session O: 24

Time: 17:00-18:30

Location: UOM_R01

POSTER PRESENTATION: SCIENCE AND STEM: ACHIEVEMENT AND INSTRUCTIONAL DESIGN**Chair**

Christian Leukel, University of Education Freiburg, Germany

GaiaXus Citizen Science: New Avenues for Metacognition, STEM Career Motivation, and Achievement

Suzanne Hiller, Blue Swallow Farm Foundation, Center for Research and Instruction in the Natural World, United States

Concreteness in Quantum Chemistry

Charlotte Müller, ETH Zurich, Switzerland; Markus Reiher, ETH Zurich, Switzerland; Manu Kapur, ETH Zurich, Switzerland

Is mathematics and science integration worth the cost?

Patrice Potvin, Université du Québec à Montréal, Canada; Emmanuel Ahr, Université du Québec à Montréal (UQAM), Canada; Stéphane Cyr, Université du Québec à Montréal (UQAM), Canada; Martin Riopel, Université du Québec à Montréal (UQAM), Canada

Effect of a Workshop Intervention on Faculty Instructional Practices: A Randomized Control Trial

Jenefer husman, University of Oregon, United States; Maura Borrego, The University of Texas at Austin, United States; Cynthia Finelli, University of Michigan, United States; Michael Prince, Bucknell University, United States; Lea Marlor, University of Michigan, United States

“you're supposed to be good at science”: Making Experiences of Asian-American Women in STEM Visible

Dionne Cross Francis, University of North Carolina at Chapel Hill, United States; Jasmyne Yeldell, University of North Carolina Chapel Hill, United States; Pavneet Kaur Bharaj, University of North Carolina, United States; Anina Mahmud, University of North Carolina, United States; Kerrie Wilkins-Yel, University of Massachusetts Boston, United States

Gender differences in adolescents' task value development based on dimensional comparison

Kezia Olive, University of Helsinki, Finland; Janica Vinni-Laakso, University of Helsinki, Finland; Junlin Yu, University of Helsinki, Finland; Katarina Salmela-Aro, Helsinki University, Finland

Session O: 25

Time: 17:00-18:30

Location: UOM_R03

POSTER PRESENTATION: HIGHER AND DOCTORAL EDUCATION

Chair

Koula Charitonos, The Open university UK, United Kingdom

Exploring the dynamic features of team reflexivity in student project teams

Lieke Lochten, University of Antwerp, Belgium; Piet Van den Bossche, University of Antwerp, Belgium; Sven De Maeyer, Antwerp University, Belgium

Student Engagement and the Learning Environment in the First Year in HE – A Systematic Review

Taiga Brahm, University of Tübingen, Germany; Mikaël De Clercq, Université catholique de Louvain (UCL); Académie de Recherche et de l'Enseignement Supérieur (ARES), Belgium; Franziska Zellweger, Zurich University of Teacher Education, Switzerland

Professional identity development and academic success during the transition to higher education

Pieter van Lamoen, Erasmus University Rotterdam, the Netherlands, Netherlands; Marieke Meeuwisse, Erasmus University Rotterdam, Netherlands; Annemarie Hiemstra, Erasmus University Rotterdam, Netherlands; Arends Lidia, Erasmus University Rotterdam, Netherlands; Sabne Severiens, Erasmus University Rotterdam, Netherlands

Doctoral graduates in the eye of employers outside academia

Lien Wille, Ghent University, Belgium; Anneleen Mortier, Ghent University, Belgium; Katia Levecque, Ghent University, Belgium

Students' Intentions to Enrol in Higher Education: The Multilevel Effects of Grade Retention

Natalie de Nóbrega dos Santos, ISPA-Instituto Universitário, Portugal; Vera Monteiro, ISPA- Instituto Universitário, Portugal; Carolina Carvalho, UIDEF, Instituto de Educação da Universidade de Lisboa, Portugal

Career-related perceptions of the Atidim program graduates

Or Shav-Artza, Technion, Israel; Shahaf Rocker Yoel, Technion, Israel; Yehudit Judy Dori, Technion and Samuel Neaman Institute, Israel

Academic Writing Interventions in Higher Education: A Systematic Review

Julianne van Meerten, University of Maryland, United States

Session O: 26

Time: 17:00-18:30

Location: UOM_GYM

ROUNDTABLE: COMMUNITIES OF LEARNERS/PRACTICE AND TEACHER EFFECTIVENESS

Chair

Jolien Quinten, Hogeschool PXL, Belgium

How Data Literate Is My School Team? Designing An Instrument To Measure Data Literacy

Ariadne Warmoes, Vrije Universiteit Brussel (VUB), Belgium; Iris Decabooter, Hasselt University, Belgium; Els Consuegra, Vrije Universiteit Brussel, Belgium; Katrien Struyven, Hasselt University / Vrije Universiteit Brussel, Belgium; Roos Van Gasse, University of Antwerp, Belgium

Instructional Quality in Economics Education

Stefanie Findeisen, University of Konstanz, Germany; Patricia Köpfer, University of Hohenheim, Germany; Liane Platz, University of Konstanz, Germany

Practice-based educational research: making practice-research activities part of teacher's work

Anna Åkerfeldt, Stockholm University, Sweden; Sylvana Sofkova Hashemi, University of Gothenburg, Sweden

Session O: 27

Time: 17:00-18:30

Location: UOM_A11

ICT DEMONSTRATION: TRANSLATING EVIDENCE INTO PRACTICE: A CLEARINGHOUSE APPROACH FOR (PRE-SERVICE) TEACHER EDUCATION

Translating evidence into practice: A clearinghouse approach for (pre-service) teacher education

Annika Diery, Technical University of Munich (TUM), Germany; Claudia Müller-Kreiner, Technische Universität München (TUM), Germany; Meg Farrell, Technische Universität München, Germany; Anastasia Asiedu, Technische Universität München (TUM), Germany; Doris Holzberger, Technical University of Munich (TUM) & ZIB (Centre for International Student Assessment), Germany; Tina Seidel, Technische Universität München, Germany

Session O: 28

Time: 17:00-18:30

Location: UOM_R02

POSTER PRESENTATION: TEACHING APPROACHES

Chair

Christa Krijgsman, Fontys Hogeschool/Kenniscentrum Youth Education for Society, Netherlands

Enhancing GTAs' questioning techniques in a mandatory training course

Peter Fat Man Lau, The University of Hong Kong, China

Students' participation: how it is understood and experienced by second-year teacher students

Irina Ivashenko Amdal, University of Agder, Norway; kristin endresen-maharaj, University of Agder, Norway

Faculty participation in discipline-based education research in the neoliberal university

Trisha Douin-Manning, University of Louisville, United States; Raymond Chastain, University of Louisville, United States; Jeffrey Hieb, University of Louisville, United States; Marci DeCaro, University of Louisville, United States; Linda Fuselier, University of Louisville, United States

Routes to change: Development of teacher educators in an educational neuroscience program

Efrat Luzzatto, MOFET Institute for Research, Israel; Gal Ben-Yehudah, The Mofet Institute, Israel; Orit Elgavi, Achva Academic College of Education, Israel; Ety Grobgeld, Achva Academic College, Israel

Teachers' implicit and explicit knowledge of learning in daily classroom pedagogy

Erik Meij, Windesheim University of Applied Sciences, Netherlands; Martijn Meeter, Vrije Universiteit Amsterdam, Netherlands; Anneke Smits, Windesheim University, Netherlands

Session P: 1

Time: 18:45-20:15

Location: HELEXPO_CC

INVITED SYMPOSIUM: PROCESS MEASURES IN THE ERA OF ARTIFICIAL INTELLIGENCE

Chair

Kshitij Sharma, Norwegian University of Science and Technology (NTNU), Norway

Organiser

Leen Catrysse, Open Universiteit, Department of Online Learning and Instruction, Belgium

Discussant

Kshitij Sharma, Norwegian University of Science and Technology (NTNU), Norway

Unfolding Socially Shared Regulation of Learning Processes with Multimodal Data and AI

Andy (Khanh Xuan) Nguyen, University of Oulu, Finland; Sanna Järvelä, University of Oulu, Finland; Carolyn Rose, Carnegie Mellon University, United States

Using AI and Multimodal SRL Trace Data to Augment Clinical Reasoning with Holoportation Technology

Roger Azevedo, University of Central Florida, United States; Megan Wiedbusch, University of Central Florida, United States; Daryn Dever, University of Central Florida, United States; Bari Hoffman, University of Central Florida, United States

Reading Comprehension of Causal Relations With Diagrams: Toward Automated Feedback of Sequence Order

Héctor J. Pjeira-Díaz, Maastricht University, Netherlands; Shashank Subramanya, Maastricht University, Netherlands; Janneke van de Pol, Utrecht University, Netherlands; Anique de Bruin, Maastricht University, Netherlands

Using Learning Analytics and Artificial Intelligence (AI) to Scaffold Self-Regulated Learning

Joep van der Graaf, Radboud University Nijmegen, Netherlands; Mladen Raković, Monash University, Australia; Yizhou Fan, Peking University, China; Lyn Lim, Technical University of Munich, Germany; Shaveen Singh, Monash University, Australia; Johanna Moore, The University of Edinburgh, United Kingdom; Dragan Gasevic, Monash University, Australia; Maria Bannert, Technical University of Munich (TUM), Germany; Inge Molenaar, Radboud University Nijmegen, Netherlands

ANNOTATIONS:
SIG 27 INVITED SYMPOSIUM

Session P: 2

Time: 18:45-20:15

Location: UOM_CH

INVITED SYMPOSIUM: RECENT ADVANCES OF EYE-TRACKING METHODS APPLIED IN EDUCATIONAL RESEARCH

Chair

Markku Hannula, University of Helsinki, Finland

Discussant

Marjaana Puurtinen, University of Turku, Finland

Histogram recognition - An algorithmic model of eye movement

Markku Hannula, University of Helsinki, Finland; Enrique Garcia Moreno-Esteve, University of Helsinki, Finland; Lonneke Boels, Utrecht University, Netherlands

Visual expertise in teachers' classroom management – a mobile eye tracking study

Halszka Maria Jarodzka, Open Universiteit, Department of Online Learning and Instruction, Netherlands; Shariisse van Driel, Open University, Netherlands; Leen Catrysse, Open Universiteit, Department of Online Learning and Instruction, Belgium; Frank Crasborn, Fontys University of Applied Sciences, Netherlands

What can eye movements reveal about the cognitive processes underlying teachers' diagnoses?

Sara Becker, Freiburg University of Education, Germany; Andreas Obersteiner, Technical University of Munich, Germany; Anika Dreher, University of Freiburg, Germany; Birgit Spinath, Heidelberg University, Germany; Tobias Dörfler, Heidelberg University, Germany

Using eye tracking and AI to identify student strategies: Illustrated by studies in math education

Maike Schindler, Universität zu Köln/ University of Cologne, Germany; Erik Schaffernicht, Örebro university, Sweden, Sweden; Anna Lisa Simon, Universität zu Köln/ University of Cologne, Germany; Parviz Asghari, Universität zu Köln/ University of Cologne, Germany; Achim J. Lilienthal, TU Munich, Germany

ANNOTATIONS:
EFG INVITED SYMPOSIUM

Session P: 3

Time: 18:45-20:15

Location: AUTH_CH

INVITED SYMPOSIUM: MULTIMODAL ANALYTICAL APPROACHES IN RESEARCHING COLLABORATIVE PROBLEM SOLVING**Chair**

Crina Damsa, University of Oslo, Norway

Organiser

Hanni Muukkonen, University of Oulu, Finland

Discussant

Nikol Rummel, Ruhr University Bochum, Germany

Multimodal collaboration analytics in collaborative problem solving – a scoping review

Rachelle Esterhazy, University of Oslo, Norway; Rogers Kaliisa, University of Oslo, Faculty of Education, Norway; Daniel Sanchez, University of Oslo, Norway; Malcolm Langford, Faculty of Law, UiO, Norway; Crina Damsa, University of Oslo, Norway

Monitoring complex collaboration processes in HE contexts: conceptual challenges in data integration

Hanni Muukkonen, University of Oulu, Finland

Multimodal learning analytics of collaborative problem solving in embodied teamwork

Dragan Gasevic, Monash University, Australia; Linxuan Zhao, Monash University, Australia; Vanessa Echeverria, Monash University, Australia; Lixiang Yan, Monash University, Australia; Roberto Martinez Maldonado, Monash University, Australia

The conditions for collaborative groups' regulation: what multimodal data can showcase?

Jonna Malmberg, University of Oulu, Finland; Hanna Jarvenoja, University of Oulu, Finland; Kateryna Zabolotna, University of Oulu, Finland, Finland; Tatiana Shubina, University of Oulu, Finland

ANNOTATIONS:
E-CER INVITED SYMPOSIUM

Session P: 4

Time: 18:45-20:15

Location: UOM_A02

SYMPOSIUM: PERCEPTIONS OF STUDENT ACHIEVEMENT: INSIGHTS ON TEACHER EXPECTATIONS AND PEER ACADEMIC REPUTATIONS**Chair**

Astrid Poorthuis, Utrecht University, Netherlands

Organiser

Astrid Poorthuis, Utrecht University, Netherlands

Discussant

Tim Mainhard, Leiden University, Netherlands

The Formation of Peer Academic Reputations after the Transition to Secondary School

Astrid Poorthuis, Utrecht University, Netherlands; María Belén Casala, Utrecht University, Netherlands

Differential Need-Support: The Role of Teacher Expectations and Academic Achievement

Astrid Poorthuis, Utrecht University, Netherlands; Iris Boer, Utrecht University, Netherlands; Anouke Bakx, Fontys University, Radboud University, Netherlands; Janneke van de Pol, Utrecht University, Netherlands

Peer Influence on (Dis)Engagement: The Role of Academic Reputation, Friendship and Social Status

Karine Verschueren, KU Leuven, Belgium; Nina Steenberghs, KU Leuven, Belgium; Jeroen Lavrijsen, KU Leuven, Belgium; Noona Kiuru, University of Jyväskylä, Finland

Relations Between Teacher Emotions and Expectations

Christine M Davies, University of Auckland, New Zealand; Mengnan Li, University of Auckland, China

Session P: 5

Time: 18:45-20:15

Location: AUTH_DC2

SYMPOSIUM: EVIDENCE-BASED DEVELOPMENT OF SCHOOL & TEACHING: FOSTERING INFORMED DECISION-MAKING THROUGH DATA USE**Chair**

Luisa Grützmaier, University of Vienna, Austria

Organisers

Luisa Grützmaier, University of Vienna, Austria; Alexander Naumann, Friedrich-Schiller-University Jena, Germany

Discussant

Charalambos Charalambous, University of Cyprus, Cyprus

A Bayesian multivariate multilevel modelling approach for analyzing classroom heterogeneity

Alexander Naumann, Friedrich-Schiller-University Jena, Germany; Dimitra Kolovou, St. Gallen University of Teacher Education (PHSG), Switzerland; Jan Hochweber, St. Gallen University of Teacher Education, Switzerland; Anna-Katharina Praetorius, University of Zurich, Switzerland

Orientation of development perspectives in the school improvement process

Luisa Grützmaier, University of Vienna, Austria; Julia Holzer, University of Vienna, Austria; Marko Lüftenecker, University of Vienna, Austria; Barbara Schober, University of Vienna, Austria; Manfred Prenzel, University of Vienna, Austria

On the Importance and Necessity of Multiple Informant Studies for Evidence-based School Development

Christoph Helm, Johannes Kepler University Linz, Austria; Stephan Gerhard Huber, PH Zug, Switzerland

Computer-based formative assessment and its potential for classroom and school development

Julia Käfer, Institute for Educational Analysis (IBBW), Germany; Evelin Ruth-Herbein, Institute for Educational Analysis (IBBW), Germany, Germany; Eva-Maria Böker, Institute for Educational Analysis (IBBW), Germany, Germany; Benjamin Fauth, Institute for Educational Analysis (IBBW), Germany, Germany

Session P: 6

Time: 18:45-20:15

Location: AUTH_DC1

SYMPOSIUM: TRANSACTIVITY AND SHARED REGULATION IN COLLABORATIVE PROBLEM SOLVING: CONCEPTS, SCAFFOLDS, ANALYSES**Chair**

Freydis Vogel, Universität Hamburg, Germany

Organisers

Freydis Vogel, Universität Hamburg, Germany; Armin Weinberger, Saarland University, Germany; Miguel Angel Rejon Zamudio, Saarland University, Germany; Jun Oshima, Shizuoka University, Japan; Cindy Hmelo-Silver, Indiana University, United States; Chen Feng, Indiana University, United States

Discussant

Ingo Kollar, University of Augsburg, Germany

Regulating transactive learning discourse: A new analytics framework using temporal network analysis

Jun Oshima, Shizuoka University, Japan; Ritsuko Oshima, Shizuoka University, Japan; Shotaro Yamashita, Shizuoka University, Japan; Jun Lu, Shizuoka University, Japan

Exploring Facilitation Strategies for Socially Shared Regulation in Game-based Problem-Solving

Chen Feng, Indiana University, United States; Haesol Bae, Indiana University Bloomington, United States; Tianshu (Haley) Wang, Indiana University Bloomington, United States; Daeun Hong, Indiana University Bloomington, United States; Krista D. Glazewski, Indiana University Bloomington, United States; Cindy Hmelo-Silver, Indiana University Bloomington, United States; Thomas Brush, Indiana University Bloomington, United States; Seung Lee, North Carolina State University, United States; Bradford W. Mott, North Carolina State University, United States; James C. Lester, North Carolina State University, United States

Effects of Transactive Sentence Starters on Knowledge Co-Construction Processes and Outcomes

Freydis Vogel, Universität Hamburg, Germany; Miguel Angel Rejon Zamudio, Saarland University, Germany; Armin Weinberger, Saarland University, Germany

Transactivity in collaborative learning processes: The complementary roles of novelty and reference

Freydis Vogel, Universität Hamburg, Germany; Armin Weinberger, Saarland University, Germany

Session P: 7

Time: 18:45-20:15

Location: UOM_CR

SYMPOSIUM: TOWARDS A BETTER UNDERSTANDING OF EF AND ITS CLOSELY RELATED CONSTRUCTS IN SCHOOL-AGE CHILDREN**Chair**

Claudia Roebbers, University of Bern, Switzerland

Organisers

Claudia Roebbers, University of Bern, Switzerland; Ebru Ger, University of Bern, Switzerland

Discussant

Evelyn Kroesbergen, Radboud University, Netherlands

Post-error slowing across inhibition and switching tasks: An explorative study

Kerry Lee, The Education University of Hong Kong, Hong Kong; Xiaozi Gao, The Education University of Hong Kong, Hong Kong

Do Science and Non-science Students Similarly Use Executive Function Skills in Maths and Physics?

Konstantinos G Tsigaridis, University of Cambridge, Greece; Rui Wang, University of Cambridge, United Kingdom; Jiayin Zheng, University of Cambridge, UK, United Kingdom; Michelle Ellefson, University of Cambridge, United Kingdom

The role of Executive Function in math and literacy domains in young children

Laura Traverso, Department of Education Sciences, University of Genoa, Italy; Paola Viterbori, Department of Education Sciences, University of Genoa, Italy; Elena Gandolfi, University of Turin, Italy; Irene Tonizzi, Department of Education Sciences, University of Genoa, Italy; Maria Carmen Usai, Department of Education Sciences, University of Genoa, Italy

The relationship between executive functions, working memory, and intelligence in children

Ebru Ger, University of Bern, Switzerland; Claudia Roebbers, University of Bern, Switzerland

Session P: 8

Time: 18:45-20:15

Location: AUTH_T002

SYMPOSIUM: NECESSARY SKILLS TO DEAL WITH UNCERTAINTIES: INSIGHTS FROM TEACHERS AND STUDENTS**Chair**

Meg Farrell, Technische Universität München, Germany

Organiser

Despoina Georgiou, Utrecht University, Netherlands

Discussant

Olga Ioannidou, University College Dublin, Ireland

Learning about the Nature of Knowledge – Lessons in Teacher Education

Olga Ioannidou, University College Dublin, Ireland; Alison Cullinane, University of Edinburgh, United Kingdom

Dealing with Uncertainties in Teaching: Primary School Teachers' Skills, Attitudes, and Evidence Use

Despoina Georgiou, Utrecht University, Netherlands; Maria Rodriguez Alcolea, Utrecht University, Netherlands

Student Agency and Future Literacy Skills: A Case Study of Scenario-Based Teaching

Olga Ioannidou, University College Dublin, Ireland; Liam Guilfoyle, University of Oxford, United Kingdom; Sibel Erduran, University of Oxford, United Kingdom

Conditional Reasoning: Supporting Elementary Students' Skills in Mathematical and Everyday Contexts

Anastasia Datsogianni, University of Cyprus, Cyprus; Stefan Ufer, Ludwig-Maximilians-Universität (LMU), Germany

Session P: 9

Time: 18:45-20:15

Location: UOM_A03

SYMPOSIUM: SELF-REGULATION IN YOUNG LEARNERS**Chairs**

Charlotte Dignath, TU Dortmund University, Germany;
Bernadette van Berk, Technical University of Dortmund,
Germany

Discussant

Nancy Perry, University of British Columbia, Canada

How do self-efficacy and procedural metacognition predict performance?

Mariette van Loon, University of Zurich, Switzerland; Claudia Roebers, University of Bern, Switzerland

What makes primary school students use SRL strategies? Expectancy and value to explain SRL

Bernadette van Berk, Technical University of Dortmund, Germany; Charlotte Dignath, TU Dortmund University, Germany

Longitudinal predictors of academic outcomes in the first year of school

Elena Vasseleu, University of Wollongong, Australia; Steven Howard, University of Wollongong, Australia

Examining environmental affordances for Self-Regulation in Australian Early Childhood settings

Deborah Pino-Pasternak, University of Canberra, Australia

Session P: 10

Time: 18:45-20:15

Location: AUTH_DC3

SINGLE PAPER: DIFFERENT ASPECTS OF DOCTORAL EDUCATION**Chair**

Marco R uth, University of Cologne, Germany

PhD Students' Acceptance of Teaching Culture and by the Teaching Community: a Phenomenographic Study

Triini Soomere, University of Tartu, Estonia; Mari Karm, University of Tartu, Estonia; Torgny Rox , Lund University, Sweden

Industrial PhD students' research communication practices in academia and the industry

Mar a Cervin-Ellqvist, Chalmers University of Technology, Sweden

The Influence of Role Models on Women in Academia - an Interview Study

Jule Hangen, Goethe University Frankfurt, Germany; Patricia K pfer, University of Hohenheim, Germany

Graduate school leadership: How Danish humanities research education leaders constitute their roles

Lynn McAlpine, University of Oxford / McGill University, Canada; S ren Bengtson, Aarhus University, Denmark; Andrew Gibson, Trinity College Dublin, Ireland

Session P: 11

Time: 18:45-20:15

Location: UOM_A08

SINGLE PAPER: FOSTERING TEACHERS' ATTITUDES TOWARDS RESEARCH AND SCIENTIFIC INQUIRY**Chair**

Jonas Dockx, KU LEUVEN, Belgium

Research use in the teaching profession: A systematic review

S lvi Mausethagen, Oslo and Akershus University College of Applied Sciences, Norway; Hege Hermansen, Oslo Metropolitan University, Norway; Hanna Holmeide, Oslo Metropolitan University, Norway; Marte Lorentzen, Oslo Metropolitan University, Norway; Vera Niederberger, P dagogische Hochschule Schwyz, Switzerland; Guri Skedsmo, P dagogische Hochschule Schwyz, Switzerland

Combining a utility value and a mindset intervention to foster teachers' research motivation

Helene Zeeb, University of Erfurt, Germany; Tamar Voss, University of Freiburg, Germany

Teachers' beliefs, attitudes and engagement towards educational research - A longitudinal study

Karlien De Jaeger, KU Leuven / EDU-Cel (main work address Kortrijk), Belgium; Mieke De Cock, KU Leuven - Department of Physics and Astronomy, Belgium; Wim Van Dooren, KU Leuven, Belgium

Science Teachers' Beliefs about Teaching and Learning Science Content and Scientific Inquiry

Verena Petermann, Justus Liebig University Giessen, Germany; Andreas Vorholzer, Technical University of Munich, Germany; Claudia von Aufschnaiter, Institute of Physics Education, Germany

Don't we need two control groups in large Randomized Controlled Trials?

Sarah Pariser, Universit  Paris 8, France; Andr  Tricot, University Paul Val ry, Montpellier, France, France; Caroline Viriot-Goeldel, Universit  Paris Est Creteil, France

ANNOTATIONS:

PLEASE NOTE THAT THIS SESSION ROOM HAS CHANGED FROM AUTH_TE1 TO UOM_A08.

Session P: 12

Time: 18:45-20:15

Location: AUTH_T102

SINGLE PAPER: INFORMAL LEARNING IN VOCATIONAL AND WORKPLACE SETTINGS**Chair**

Natalie Boelen, Hogeschool PXL, Belgium

Learning from errors in vocational education and training

Veronika Anselmann, University of Education Schwäbisch Gmünd, Germany

In-service student teacher competency development: the impact of an adapted guidance approach

Katrien Cuyvers, University of Antwerp, Belgium; Hannes Van der Linden, University of Antwerp, Belgium; Sabrina Govaerts, AP University of Applied Sciences and Arts Antwerp, Belgium; Barbra Schits, AP University of Applied Sciences and Arts Antwerp, Belgium; Tom Smits, University of Antwerp, Belgium

A Diary Study on Formal and Informal Learning Opportunities for Teachers in Vocational Schools

Manuel Böhm, Universität Mannheim, Germany; Andreas Rausch, University of Mannheim, Germany

Exploring the integration of theory and practice in work-based learning

Zsuzsa Kovács, Eötvös Loránd University, Budapest, Hungary; Emese Schiller, Eötvös Loránd University, Hungary; Nóra Hegyi-Halmos, Eötvös Loránd University, Budapest, Hungary

Session P: 13

Time: 18:45-20:15

Location: UOM_A05

SINGLE PAPER: TEACHERS AND TEACHING DURING THE COVID-19 PANDEMIC II**Chair**

Isabelle Kalkusch, University of Teacher Education of Special Needs, Switzerland

A Systematic Review of Empirical Studies Examining the Teaching Profession in the COVID-19 Pandemic

Sherry Shilon, the Open University of Israel, Israel; Ayelet Becher, the Open University of Israel, Israel; Tali Aderet-German, Ben Gurion University of Negev, Israel

Teacher educators' experiences and well-being during COVID-19 online teaching

Marjaana Veermans, University of Turku, Finland; Piia Naykki, University of Jyväskylä, Finland; Anne-Maria Korhonen, Hamk University of Applied Sciences, Finland; Eetu Lehtiö, University of Turku, Finland; Lauri Salo, University of Turku, Finland

Effects of the COVID-19 pandemic on social-emotional skills of students from a teachers' perspective

Birgitta Kopp, Ludwig-Maximilians-University, Germany; Annika Lueg, Ludwig-Maximilians-Universität (LMU), Germany

Student perceptions of teaching quality during the COVID-19 pandemic in Indonesia

Maria Teodora Ping, Mulawarman University, Indonesia; Anindito Aditomo, Educational Standards, Curriculum and Assessment Agency, MOECRT and University of Surabaya, Indonesia; Irsyad Zamjani, Centre for education standard and policy, MOECRT, Indonesia; Asrijanty Asrijanty, Center for Education Assessment, MOECRT, Indonesia; Tri Lestari, Widya Mandala Catholic University, Indonesia; Anita Lie, Widya Mandala Catholic University, Indonesia; Ridwan Maulana, GION - University of Groningen, Netherlands

Session P: 14

Time: 18:45-20:15

Location: UOM_R08

SINGLE PAPER: EYE TRACKING AND ONLINE MEASURES OF LEARNING PROCESSES**Chair**

Fien De Smedt, Ghent University, Belgium

Culture, pedagogy, and cognition: Think-aloud analysis of cultural differences in teacher cognition

Nora McIntyre, University of Southampton, United Kingdom; Phyllis Lau, University of Southampton, United Kingdom; Davy Tsz Kit Ng, The University of Hong Kong, Hong Kong

Prior knowledge predicts students' learning and later systems thinking skills of wicked problems

Tomi Kiviluoma, University of Helsinki, Finland; Ilona Södervik, University of Helsinki, Finland; Riitta Savolainen, University of Helsinki, Finland; Helena Åström, University of Helsinki, Finland

Hybrid explanatory animations: Anti-cued context improves compositional design

Jean-Michel Boucheix, University of Dijon, LEAD-CNRS, France; Richard Lowe, Curtin University, Australia

Session P: 15

Time: 18:45-20:15

Location: UOM_R05

SINGLE PAPER: ANXIETY AND STRESS IN STUDENTS WITH SPECIAL EDUCATIONAL NEEDS**Chair**

Judith Gulikers, Wageningen University, Netherlands

School stressors in adolescents with Specific Learning Disorders: frequency and vulnerability

Valentina Tobia, Vita-Salute San Raffaele University, Italy; Michela Moretti, Vita-Salute San Raffaele University, Italy; Martina Lattanzi, Vita-Salute San Raffaele University, Italy; Anna Lucia Ogliari, Vita-Salute San Raffaele University, Italy

Anxiety in students with intellectual disabilities: The influence of social acceptance and rejection

Verena Hofmann, University of Fribourg, Switzerland

Resilience and its association to loneliness in adolescents with and without learning difficulties

Filippos Papazis, National and Kapodistrian University of Athens, Greece; Anastasia Vlachou, Department of Educational Studies, National and Kapodistrian University of Athens, Greece; Panayiota Stavroussi, Department of Special Education, University of Thessaly, Greece

Session P: 16

Time: 18:45-20:15

Location: UOM_A07

SINGLE PAPER: COMPREHENSION OF TEXT AND GRAPHICS THROUGH MULTIMEDIA LEARNING**Chair**

Rui Maio, Faculty of Psychology and Educational Sciences of the University of Porto, Portugal

Reading research meets multimedia: text-picture combinations are validated automatically

Anne Schueler, Leibniz-Institut für Wissensmedien, Germany; Pauline Frick, Leibniz-Institut für Wissensmedien (IWM), Germany

Aesthetics of illustrations in emotional design: effects on user experience and multimedia learning.

Julien Venni, University of Geneva, Switzerland; Mireille Bétrancourt, University of Geneva, Switzerland

Interactive Dynamic Visualizations – Evidence from an Experimental Study

Stefanie Findeisen, University of Konstanz, Germany; Josef Guggemos, University of Education Schwäbisch Gmünd, Germany

Session P: 17

Time: 18:45-20:15

Location: AUTH_T202

SINGLE PAPER: VIDEO-BASED LEARNING: SUPPORTING TEACHERS AND STUDENTS**Chair**

Juming Jiang, The University of Hong Kong, Hong Kong

Fostering student teachers' expert-like video analyses to develop professional vision

Jasmin Lilian Bauersfeld, TU Dortmund, Germany; Bernadette Gold, TU Dortmund University, Germany

Using videos in training fourth grade children's inferencing skills

Brechtje van Zeijts, Erasmus University Rotterdam, Netherlands; Dianne Venneker, Leiden University, Netherlands; Lesya Ganushchak, Erasmus University Rotterdam, Netherlands; Björn de Koning, Erasmus University Rotterdam, Netherlands; Huib Tabbers, Erasmus University Rotterdam, Netherlands

Using a 360° hypervideo for peer analysis of healthcare professional practice. An explorative study

Francesca Amenduni, Swiss Federal University for Vocational Education and Training (SFUVET), Switzerland; Vito Candido, SFUVET, Switzerland; Rita Cosoli, SFUVET, Switzerland; Alberto Cattaneo, Swiss Federal University for Vocational Education and Training, Switzerland

Effects of expert feedback type on students' professional vision and self-efficacy

Christopher Neil Prilop, Aarhus University, Denmark

Session P: 18

Time: 18:45-20:15

Location: UOM_A13

SINGLE PAPER: STUDENT MOTIVATION AND ACHIEVEMENT: EVIDENCE FROM DIFFERENT THEORETICAL PERSPECTIVES**Chair**

Maria Cutumisu, University of Alberta, Canada

On the Joint Effects of Social, Dimensional, and Temporal Comparisons: A Longitudinal Experiment

Fabian Wolff, Universität of Koblenz, Germany

Expectancy-Value Constructs and Basic Needs as Predictors for Performance in Data-Based Modeling

Matthias Mohr, Ludwig-Maximilians-Universität (LMU), Germany; Stefan Ufer, Ludwig-Maximilians-Universität (LMU), Germany

How Do Mindset Beliefs Relate to Other Forms of Motivation?

BENGU CILALI, Bilkent University, Türkiye; Aikaterini Michou, University of Ioannina, Greece, Greece; Martin Daumiller, University of Augsburg, Germany; Chris S. Hulleman, University of Virginia, United States; Kenn Barron, James Madison University, United States; Claudia C. Sutter, University of Virginia, United States

Motivation-effort-achievement cycle in learning: a short-range dynamic experiment

TuongVan Vu, Vrije Universiteit Amsterdam, Netherlands; Martijn Meeter, Vrije Universiteit Amsterdam, Netherlands; Abe Hofman, Universiteit van Amsterdam, Netherlands; Brenda Jansen, University of Amsterdam, Netherlands; Lucía Magis-Weinberg, University of Washington, United States; Nienke van Atteveldt, Vrije Universiteit Amsterdam, Netherlands

Session P: 19

Time: 18:45-20:15

Location: UOM_A04

SINGLE PAPER: IMMERSIVE TECHNOLOGIES FOR LEARNING AND SOCIAL BEHAVIOUR**Chair**

Benedikt Gottschlich, University of Tübingen, Germany

Co-designing for Immersive Learning Experiences in the Classroom

Morgane Domanchin, University of Oslo, Norway; Hans Christian Arnseth, University of Oslo, Norway; Kenneth Silseth, University of Oslo, Norway; Rolf Steier, Oslomet, Norway

Virtual Reality to support the development of student-teachers' classroom management skills

Wilfried Admiraal, Oslo Metropolitan University, Norway; Nadira Saab, Leiden University, Netherlands; Deniz Atal, Ankara University, Türkiye; Brigitte Theeuwes, ICLON, Leiden University, Netherlands

Preservice Teachers' Self-Regulated Learning in Immersive Virtual Environments: A Multimodal Study

Engin Ader, Boğaziçi University, Türkiye; Alexander Groeschner, Friedrich Schiller University Jena, Germany; Tova Michalsky, Bar Ilan University, Israel; Ipek Paksoy, Boğaziçi University, Faculty of Education, Türkiye; Florentine Hickethier, Friedrich-Schiller-University Jena, Germany; Mathias Dehne, Friedrich Schiller University Jena, Germany; Roger Azevedo, University of Central Florida, United States; Zorit Jassin, Bar Ilan University, Israel

Children's and adults' spatial representations of a virtual environment.

Sophie Bénard - Linh Quang, University of Geneva, Switzerland; Sandra Berney, University of Geneva, Switzerland; Mireille Bétrancourt, University of Geneva, Switzerland; Roland Maurer, University of Geneva, Switzerland

Session P: 20

Time: 18:45-20:15

Location: AUTH_TE2

SINGLE PAPER: CONCEPTUAL CHANGE AND KNOWLEDGE CONSTRUCTION**Chair**

Janneke stuelen, University Utrecht, Netherlands

Diagnosing and Promoting the Understanding of Chemical Bonding Theory

Adrian Zwyssig, ETH Zurich - Research on Learning and Instruction, Switzerland

The Cronbach's Alphas of Domain-Specific Knowledge Tests Before and After Learning: A Meta-Analysis

Michael Schneider, University of Trier, Germany; Peter Edelsbrunner, ETH Zurich, Switzerland; Bianca Simonsmeier, University of Trier, Germany

Identifying central misconceptions via network analysis

Christian Thurn, ETH Zurich, Switzerland

Session P: 21

Time: 18:45-20:15

Location: UOM_A11

SINGLE PAPER: CRITICAL COMPREHENSION OF TEXT AND GRAPHICS

Chair

Åsa Wengelin, University of Gothenburg, Sweden

Communicating scientific complexity encourages intellectual humility and epistemic trust

Dorothe Kienhues, University of Münster, Germany; Nina Vaupotič, University of Vienna, Austria; Regina Jucks, WWU Münster, Germany

Do students fall for the easiness effect of science popularization? An intervention study

Marc Stadler, Ruhr-University Bochum, Institute of Educational Science, Germany; Lisa Scharrer, University of Frankfurt, Germany; Franca Urbisch, Ruhr-University Bochum, Institute of Educational Sciences, Germany

Refuting educational myths: Do reading goals make a difference?

Andreas Lederer, University of Erfurt, Germany; Jana Asberger, University of Erfurt, Germany; Eva Thomm, University of Erfurt, Germany; Johannes Bauer, University of Erfurt, Germany

Critical graph reading: Graphs can mislead adolescents

Kristian Kili, Tampere University, Finland; Jake McMullen, University of Turku, Finland; Antero Lindstedt, Tampere University, Finland; Tua Nylén, University of Helsinki, Finland; Petteri Muukkonen, University of Helsinki, Finland; Manuel Ninaus, University of Graz, Austria

Session P: 22

Time: 18:45-20:15

Location: UOM_R09

SINGLE PAPER: MUSIC EDUCATION

Chair

Genevieve Allaire-Duquette, Université de Sherbrooke, Canada

Evidence-based Music Teaching: a Systematic Review and a Meta-Analysis

Daniela - Georgiana Valache (Voinescu), West University of Timisoara, Romania; Marian Ilie, West University of Timisoara, Romania

Music Training Produces Near but not Far Transfer of Learning in School-age Children

Leonor Neves, University Institute of Lisbon (ISCTE-IUL), Portugal; Marta Martins, University Institute of Lisbon (ISCTE-IUL), Portugal; Ana Isabel Correia, University Institute of Lisbon (ISCTE-IUL), Portugal; São Luís Castro, University of Porto - Portugal, Portugal; César Lima, University Institute of Lisbon (ISCTE-IUL), Portugal

Music and Music Integration in Preschool Programs: A Scoping Review

Ana Rodrigues de Lemos, Faculty of Psychology and Educational Sciences of the University of Porto, Portugal; Teresa Leal, University of Porto, Portugal; Diana Alves, Centre for Psychology at University of Porto, Portugal; Isabel M.P. Abreu-Lima, University of Porto, Portugal

Teaching Crows and Nightingales to Sing: Exploring Vocal Abilities in Primary School Music Education

Zyxcban Wolfs, Open University of the Netherlands, Netherlands; Els Boshuizen, Open University of the Netherlands, Netherlands; Saskia Brand-Gruwel, Open University of the Netherlands, Netherlands

Session P: 23

Time: 18:45-20:15

Location: UOM_R03

POSTER PRESENTATION: TEACHERS' SELF-EFFICACY

Chair

Frank Hellmich, Paderborn University, Germany

Teachers' self-efficacy and attitudes towards gifted and talented education

Lucía Barrenetxea-Mínguez, University of Deusto, Spain

Teachers' Use of Informal Learning Opportunities in Germany

Sebastian Röhl, University of Tübingen, Germany; Jana Groß Ophoff, University College of Teacher Education Vorarlberg, Austria; Colin Cramer, University of Tübingen, Tübingen School of Education, Germany

Resilience, Self-Compassion and Self-Efficacy in Reducing Special Education Teachers Technostress

Pierpaolo Limone, University of Foggia, Italy; Giusi Antonia Toto, University of Foggia, Italy; Benedetta Ragni, University of Foggia, Italy

Motivational determinants of early-career teachers' work engagement

Dora Petrović, Institute for Social Research in Zagreb, Croatia; Iris Marušić, Institute for Social Research, Croatia; Jelena Matić, Institute for Social Research - Zagreb, Croatia, Croatia

Experiences fostering self-efficacy in teaching science among in-service elementary school teachers

Estelle Desjarlais, Université du Québec à Montréal, Canada; Pierre Chastenay, Université du Québec à Montréal (UQAM), Canada; Jean-Philippe Ayotte-Beaudet, Université de Sherbrooke, Canada

Session P: 24

Time: 18:45-20:15

Location: UOM_R04

POSTER PRESENTATION: TEACHING APPROACHES, EMOTION, MOTIVATION AND ATTITUDES**Chair**

Annette Busse, University of Kassel, Institute of Educational Science, Germany

Enjoyment is Reciprocally Transmitted Between Teachers and Students

Muhterem Dindar, Tampere University, Finland; Anne Christiane Frenzel, Ludwig-Maximilians-Universität München, Germany; Reinhard Pekrun, University of Essex, United Kingdom; Corinna Reck, Ludwig-Maximilians-Universität München, Germany; Anton Marx, Ludwig-Maximilians-Universität, Germany

Student Perception of Empathy and Teacher Professional Development: A Model for Identity Exploration

Joseph Eisman, Temple University, United States; Jeff Vomund, George Mason University, United States

Instructional strategies as a moderator between self-regulated learning and academic achievement

Yuichiro Sato, Keio University, Japan; Yuno Shimizu, Hyogo University of Teacher Education, Japan; Takashi Fukutomi, Minami Kyushu University, Japan

Teachers' attitudes towards their responsibility and perceived use of motivational factors

Asta B Schram, University of Iceland, Iceland; Abigail Snook, University of Iceland, Iceland

Feeling Good while Motivating Students: The Role of Teaching Identity and Motivation to Teach

Branko Vermote, Ghent University, Belgium; Maarten Vansteenkiste, Ghent University, Belgium; Bart Soenens, Ghent University, Belgium; Wim Beyers, Ghent University, Belgium

Autonomy Support Begins with Understanding: Empathy and Students' Basic Psychological Needs

Jeff Vomund, George Mason University, United States; Angela Miller, George Mason University, United States

Session P: 25

Time: 18:45-20:15

Location: UOM_R01

POSTER PRESENTATION: LEARNING ANALYTICS**Chair**

Carolin Hahnel, DIPF | Leibniz Institute for Research and Information in Education, Centre for International Student Assessment (ZIB), Germany

Predictive modeling of problem-solving behavior in an office simulation to identify weak students

Sabrina Ludwig, University of Mannheim, Germany; Andreas Rausch, University of Mannheim, Germany; Viola Deutscher, University of Mannheim, Germany; Jürgen Seifried, University of Mannheim, Germany

A step forward: How stakeholders envision overcoming learning analytics' current challenges?

Ancele Kaveri, University of Oulu, Finland; Hanni Muukkonen, University of Oulu, Finland

University Students Experience Learning as View-Turns

Kristina Ahlberg, University of Gothenburg, Sweden, Sweden

Students' physiological arousal and synchrony in the presence of a manipulated cognitive challenge

Joni Läämsä, University of Oulu, Finland; Andy (Khanh Xuan) Nguyen, University of Oulu, Finland; Márta Sobocinski, University of Oulu, Finland; Sanna Järvelä, University of Oulu, Finland

Statistically Gauging Vital Subcomponents of Diagrammatic Competency

Shun Saso, The University of Tokyo, Japan; Yuri Uesaka, The University of Tokyo, Japan

Student summaries as performance predictors in online learning settings using NLP

Ilias Karasavvidis, University of Thessaly, Greece; Vasiliki Ragazou, University of Thessaly, Greece; Charalampos Papadimas, University of Thessaly, Greece

Session P: 26

Time: 18:45-20:15

Location: UOM_R02

POSTER PRESENTATION: LEARNING AND DEVELOPMENTAL DISABILITIES**Chair**

Thomas Martens, Medical School Hamburg, Germany

Participative autism research: reaching social validity through the participatory research index

Katerina Dounavi, Queen's University Belfast, United Kingdom

Experiences with individual accommodation for students with dyslexia perceived needs in HE

Liv Häberg, Volda University College, Norway; beate farstad, Volda University College, Norway

German Adaption and Psychometric Properties of the CERQ-kids

Taina Marisa Gabriel, Leibniz Universität Hannover, Germany; Moritz Börner-Ringleb, Leibniz University Hannover, Germany

ID-READ: Individual Differences in Reading Comprehension with Eye-tracking in AD(H)D and Dyslexia

Ellen Kok, Utrecht University, Netherlands; Carolien A. N. Knoop-van Campen, Radboud University Nijmegen, Netherlands; Eliane Segers, Behavioural Science Institute, Radboud University Nijmegen, Netherlands

Speech intelligibility: A latent variable approach on utterances' transcriptions

Jose Manuel Rivera Espejo, University of Antwerp, Belgium; Sven De Maeyer, Antwerp University, Belgium; Steven Gillis, Antwerp University, Belgium

Session P: 27

Time: 18:45-20:15

Location: UOM_A06

WORKSHOP: TEACHING SEQUENCES ON SPATIAL ORIENTATION USING A VIRTUAL CITY ON COMPUTER IN GRADES 2-4 IN GENEVA**Teaching sequences on spatial orientation using a virtual city on computer in grades 2-4 in Geneva**

Sabrina Matri, University of Geneva, Switzerland; Jean-Luc Dorier, University of Geneva, Switzerland; Fatou-Maty Diouf, University of Geneva, Switzerland

Session P: 28

Time: 18:45-20:15

Location: UOM_A10

ICT DEMONSTRATION: SUPPORTING TEACHERS IN DESIGNING (DIGITAL) TEACHING AND LEARNING WITH MYSCRIPTING**Supporting teachers in designing (digital) teaching and learning with myScripting**

Claude Müller, Zurich University of Applied Sciences, Switzerland; Jennifer Erlemann, ZHAW School of Management and Law, Switzerland

Session Q: 1

Time: 08:00-09:30

Location: AUTH_CH

INVITED SYMPOSIUM: THE POTENTIAL OF BIOPHYSIOLOGY FOR UNDERSTANDING MOTIVATION, ENGAGEMENT, AND LEARNING**Chair**

Tim Mainhard, Leiden University, Netherlands

Discussant

Reinhard Pekrun, University of Essex, United Kingdom

Cooperation in primary school children: Exploring cardiac vagal tone and cognitive control

Benedetta Zagni, University of Padua - Italy, Italy; Libera Ylenia Mastromatteo, University of Padua, Italy; Sara Scrimin, University of Padova, Italy

The effect of physiological stress on young students' achievement behaviour and learning

Anna-Liisa Jögi, Tallinn University, Estonia; Eija Pakarinen, University of Jyväskylä, Finland; Marja-Kristiina Lerkkanen, University of Jyväskylä, Finland

Students' Psychological Orientations to Science Tests: An Educational and Bio Psychological Study

Andrew Martin, University of New South Wales, Australia; Roger Kennet, The University of New South Wales, Australia; Emma Burns, University of New South Wales, Australia; Rebecca Collie, University of New South Wales, Australia; Joel Pearson, The University of New South Wales, Australia

University Students' Emotional Responses to Immediate Feedback in Adaptive Learning Technologies

Anne Horvers, Radboud University Nijmegen, Netherlands; Tibor Bosse, Radboud University, Netherlands; Ard Lazonder, Radboud University, Netherlands; Inge Molenaar, Radboud University, Netherlands

ANNOTATIONS:
EFG INVITED SYMPOSIUM

Session Q: 2

Time: 08:00-09:30

Location: UOM_CR

SYMPOSIUM: ECOLOGY OF FAMILY-SCHOOL PARTNERSHIP WITHIN SOCIO-ECONOMICALLY AND ETHNICALLY DIVERSE CONTEXTS**Chair**

Alexandra Karousou, Democritus University of Thrace, Greece

Organisers

Pauline Slot, Utrecht University, Netherlands; Efthymia Penderi, Democritus University of Thrace, Greece

Discussant

Paul Leseman, Utrecht University, Netherlands

Young children's "educational niche": Family-school partnership and culture responsive relationships

Efthymia Penderi, Democritus University of Thrace, Greece

Turkish and Maghreb parents' relations with ECEC teachers: Role of family and (country) context

Ryenne Francot, University Utrecht, Netherlands; Katharina Ereky-Stevens, University of Oxford, United Kingdom; Martine Broekhuizen, Utrecht University, Netherlands; Hande Erdem-Möbius, Otto-Friedrich-Universität Bamberg, Germany; Paul Leseman, Utrecht University, Netherlands

Teacher-parent relationship in ECE and primary education. A Cross-National Study in Six Countries

Valentina Pagani, Università di Milano Bicocca, Italy; Pauline Slot, Utrecht University, Netherlands; Efthymia Penderi, Democritus University of Thrace, Greece; Helga Norheim, Faculty of Humanities, Sports and Educational Science, Norway; Olga Wysłowska, Faculty of Education, University of Warsaw, Poland; Krzysztof Bulkowski, University of Warsaw, Poland

What aspects contribute to parent-professional relationships in a diverse (pre)school context?

Pauline Slot, Utrecht University, Netherlands; Efthymia Penderi, Democritus University of Thrace, Greece; Helga Norheim, Faculty of Humanities, Sports and Educational Science, Norway; Valentina Pagani, Università di Milano Bicocca, Italy; Olga Wysłowska, Faculty of Education, University of Warsaw, Poland; Krzysztof Bulkowski, University of Warsaw, Poland

Session Q: 3

Time: 08:00-09:30

Location: AUTH_T002

SYMPOSIUM: THE INTERPLAY OF MOTIVATION, EMOTION, AND SELF-REGULATION IN DIVERSE POPULATIONS**Chairs**

Adar Ben-Eliyahu, University of Haifa, Faculty of Education, Israel; Lihi Sarfaty, University of Haifa, Faculty of Education, Israel

Discussant

Matthew Bernacki, University of North Carolina at Chapel Hill, United States

Relations Among College Science Students' Motivation, Belonging, Emotions, and Intentions to Persist

Arianna White-Levatich, Old Dominion University, United States; Anthony Perez, Old Dominion University, United States; Lisa Linnenbrink-Garcia, Michigan State University, United States

Students' Use of Self-Testing in STEM Programs: Interindividual Differences in Test Engagement

Fani Lauermann, University of Bonn, Germany; Daria Katharina Benden, University of Bonn, Germany; Jeffrey DeVries, TU Dortmund University, Germany

Metaprocesses and Self-Regulated Learning Among High School Students: A Latent-Profile Approach

Alla Hemi, Bar Ilan University, Israel; Adar Ben-Eliyahu, University of Haifa, Faculty of Education, Israel; Amit Meitar-Doron, University of Haifa, Faculty of Education, Israel; Kiril Shelachevitch, University of Haifa, Faculty of Education, Israel; Lihi Sarfaty, University of Haifa, Faculty of Education, Israel

A Complex Dynamic Systems Perspective on Teacher Self-Regulation of Instructional Practice

Joseph Eisman, Temple University, United States; Avi Kaplan, Temple University, United States; Lightning Jay, University of Pennsylvania, United States; Abby Reisman, University of Pennsylvania, United States; Timothy Patterson, Temple University, United States; Wendy Chan, University of Pennsylvania, United States; Jenni Conrad, Temple University, United States

Session Q: 4

Time: 08:00-09:30

Location: AUTH_DC1

SYMPOSIUM: COGNITIVE PROCESSES IN CRITICAL READING**Chair**

Alexandra List, The Pennsylvania State University, United States

Organiser

Patricia Alexander, University of Maryland, United States

Discussant

Alexandra List, The Pennsylvania State University, United States

COMPREHENSION AND EVALUATION: ARGUMENT TYPE, BELIEF CONSISTENCY AND READING GOALS

Sylvia Maria Savvidou, University of Cyprus, Cyprus; Irene Anna Diakidoy, University of Cyprus, Cyprus; Lucia Mason, University of Padova, Italy

THE RELATIONSHIPS AMONG VISUAL BEHAVIOR, MULTIPLE-TEXT PROCESSING STRATEGY USE AND TASK OUTCOMES

An-Hsuan Wu, National Taiwan Normal University, Taiwan; Meng-Jung Tsai, National Taiwan Normal University, Taiwan

CRITIQUE, AND NOT SUMMARY, TASKS PROMOTE CRITICAL READING

Gala Campos, The Pennsylvania State University, United States; Alexandra List, The Pennsylvania State University, United States; Lily A. Russell, The Pennsylvania State University, United States; Hongcui Du, The Pennsylvania State University, United States; Zheng Yao, The Pennsylvania State University, United States

RECURSIVITY IN ARGUMENTATIVE WRITING BASED ON CONFLICTING SOURCES

Christian Tarchi, University of Florence, Italy; Ruth Villalon, University of Cantabria, Spain; Nina Vandermeulen, Umeå University, Sweden; Lidia Casado Ledesma, University of Florence, Italy; Anna Paola Fallaci, University of Florence, Italy

Session Q: 5

Time: 08:00-09:30

Location: UOM_A03

SYMPOSIUM: PROCESSES AND EFFECTS OF TEACHER COLLABORATION ON SCHOOL IMPROVEMENT**Chairs**

Andrea Wullschleger, University of Applied Sciences and Arts Northwestern Switzerland PH (FHNW), Switzerland; Katharina Maag Merki, University of Zurich, Switzerland

Discussant

Eva Kyndt, Swinburne University of Technology, Australia

Schools' collaborative practices during the COVID-19-pandemic and their longitudinal effects

Francesca Suter, University of Teacher Education of the Grisons, PHGR, Switzerland; Tobias Feldhoff, Johannes Gutenberg University of Mainz, Germany; Katharina Maag Merki, University of Zurich, Switzerland; Falk Radisch, Institute of school education and educational research, Germany; Nina Jude, University Heidelberg, Germany; Stefan Brauckmann-Sajkiewicz, Alpen-Adria-University, Institute of instructional and school development, Austria

How effective is a high amount of teacher collaboration that is perceived as useful?

Andrea Wullschleger, University of Applied Sciences and Arts Northwestern Switzerland PH (FHNW), Switzerland; Katharina Maag Merki, University of Zurich, Switzerland; Urs W. Grob, University of Zurich, Switzerland; Beat Rechsteiner, University of Zurich, Switzerland

Micro-processes of teacher collaboration: Professional communication related to teaching

Julia Isabella Warwas, University of Hohenheim, Germany; Christian Schadt, University of Hohenheim, Germany

Teacher Collaboration in Class Teams: Network characteristics and Typology

Charlotte Baez, Sankt Gallen University of Teacher Organisation, Switzerland; Franziska Vogt, St.Gallen University of Teacher Education, Switzerland; Doris Kunz Heim, PH FHNW, Switzerland

Session Q: 6

Time: 08:00-09:30

Location: AUTH_DC3

SINGLE PAPER: ONLINE TEACHING DURING COVID-19**Chair**

Maria De Haan, Utrecht University, Netherlands

How does teacher adaptability influence positive attitudes towards online teaching during COVID-19?

Mingyao Sun, The University of Hong Kong, Hong Kong; Xianhan Huang, The University of Hong Kong, Hong Kong; Chun Lai, The University of Hong Kong, Hong Kong; Caixia Sun, Huzhou University, China

Experiences of teachers with digital learning during the COVID-19 pandemic: an exploratory research

Adriaan Vervoort, UHasselt, Belgium; Katrien Struyven, Hasselt University / Vrije Universiteit Brussel, Belgium; Wendy Schouteden, Hasselt University, Belgium; Mario Gielen, Hasselt University, Belgium

Teaching online during the COVID-19 pandemic: an observational study

Carlos González, Pontificia Universidad Católica de Chile, Chile; Daniel Ponce, Pontificia Universidad Católica de Chile, Chile; Macarena Yancovic, Universidad Finis Terrae, Chile

Portuguese teachers' adaptation and pupil level of participation during the COVID-19 pandemic

Maria A. Flores, University of Minho, Portugal; Alexandra Barros, University of Lisbon, Portugal; Ana Veiga Simão, Faculty of Psychology, University of Lisbon, Portugal; Eva Fernandes, University of Minho, Portugal; Paulo Flores, University of Minho, Portugal; Paula Costa Ferreira, University of Lisbon, Portugal

Session Q: 7

Time: 08:00-09:30

Location: UOM_A10

SINGLE PAPER: INSTRUCTIONAL DESIGN FOR MULTIMEDIA LEARNING**Chair**

Maria Birbili, Aristotle University of Thessaloniki, Greece

Combining Physical and Mental Self-management Strategies in Multimedia Learning: Best of Both Worlds

Björn de Koning, Erasmus University Rotterdam, Netherlands

Effects of signaling in a collaborative virtual reality learning environment

Patrick Albus, Ulm University, Germany; Tobias Drey, Institute of Media Informatics, Ulm University, Germany; Tina Seufert, Ulm University, Germany

Decreasing (passive) extraneous load without reducing (active) effort? - A signaling study

Swantje Tannert, University of Erfurt, Germany; Mathias Berg, University of Erfurt, Germany; Meret Hanses, University of Erfurt, Germany; Friederike Luise Hahmann, University of Erfurt, Germany; Katharina Ockl, University of Erfurt, Germany; Inga Glogger-Frey, University of Erfurt, Germany

Multimedia Effects in Testing: A Systematic Review and Meta-Analysis

Marlit Annalena Lindner, IWM - Leibniz-Institut für Wissensmedien, Universität Tübingen, Germany; Lauritz Schewior, IPN - Leibniz Institute for Science and Mathematics Education, Germany

Session Q: 8

Time: 08:00-09:30

Location: AUTH_TE2

SINGLE PAPER: VOCATIONAL AND WORKPLACE LEARNING**Chair**

Nina Bonderup Dohn, University of Southern Denmark, Denmark

Does reading help in choosing a career? A mixed-methods study in the vocational transition system

Jule Hangen, Goethe University Frankfurt, Germany; Julia Gorges, Philipps-Universität Marburg, Germany; Eveline Wuttke, Goethe-Universität Frankfurt, Germany

Macro-Scaffolding in Vocational Education: Coherence and Adaptivity of Instructional Design

Manon Heuer-Kinscher, Goethe University Germany, Germany; Gerhard Minnameier, Goethe-Universität Frankfurt, Germany; Rico Hermkes, Goethe-Universität Frankfurt, Germany; Benjamin Herbert, Goethe Universität Frankfurt a.M., Germany

Informal Learning Strategies in the Workplace: What they are and how to foster them

Katja Häußermann, Ulm University Institute of Psychology and Education, Germany; Anne Frieda Doris Kittel, Ulm University, Germany; Tina Seufert, Ulm University, Germany

Facilitator dialogical moves supporting learning and regulation in interprofessional teams

Amber Kornet, Saxion University of Applied Sciences, Netherlands; Maaïke Endedijk, University of Twente, Netherlands; Sebastian Dennerlein, University of Twente, Netherlands; Tijmen Schipper, Windesheim University of Applied Sciences, Netherlands

Session Q: 9

Time: 08:00-09:30

Location: UOM_R08

SINGLE PAPER: ARGUMENTATION IN SCIENCE EDUCATION**Chair**

Daniela - Georgiana Valache (Voinescu), West University of Timisoara, Romania

Learning through problem-based argumentation: the differential effects across educational levels

Antonia Larrain, Universidad Alberto Hurtado, Chile; Paulina Freire, Pontificia Universidad Católica de Chile, Chile; Valeska Grau Cardenas, Pontificia Universidad Católica de Chile, Chile; Marisol Gómez, Universidad Alberto Hurtado, Chile; Patricia López, Universidad Alberto Hurtado, Chile; Diego Cosmelli, Pontificia Universidad Católica de Chile, Chile; Hernán Cofré, Pontificia Universidad Católica de Valparaíso, Chile

Analysing argumentation episodes: a case study from physics teacher education

Maija Nousiainen, University of Helsinki, Finland; Karoliina Vuola, University of Helsinki, Finland

Learning and arguing about a socio-scientific issue in an informal learning setting

Stephan Schwan, Leibniz-Institut für Wissensmedien, Germany; Magdalena Novak, Leibniz-Institut für Wissensmedien, Germany; Siëlle Gramser, Römisch-Germanisches Zentralmuseum, Leibniz-Forschungsinstitut für Archäologie, Germany; Sabine Gerber-Hirt, Deutsches Museum von Meisterwerken der Naturwissenschaften und Technik, Germany; Feliza Ceseña, Deutsches Museum von Meisterwerken der Naturwissenschaften und Technik, Germany; Annette Noschka-Roos, Freelancer, Germany; Doris Lewalter, Technical University of Munich (TUM), Germany

Toulmin's argumentation model scaffolds the coordination class concept of force: a case study

Costas Naoum, University of Thessaly, Greece; vassilis Kollias, University of Thessaly, Greece

Session Q: 10

Time: 08:00-09:30

Location: AUTH_T102

SINGLE PAPER: TEACHERS' EXPECTATIONS AND BELIEFS AND ASSOCIATIONS TO STUDENT ACADEMIC OUTCOMES**Chair**

ZOE KANTARIDOU, UNIVERSITY OF MACEDONIA, Greece

Teacher expectations: Contributions to student academic outcomes and beliefs

Christine M Davies, University of Auckland, New Zealand

Teacher perceptions of student motivation: Contribution to differences in grades and achievement

Katharina Schnitzler, University of Potsdam, Germany; Cornelius Brandmiller, DIPF | Leibniz Institute for Research and Information in Education, Germany; Hanna Dumont, University of Potsdam, Department of Education, Germany

A Systematic Review of Teacher or Coach Expectation Effects on Children's Motor Skill Learning

Xiaoyu Zhan, University of Groningen, Netherlands; Anne de Bruijn, Vrije Universiteit Amsterdam, Netherlands; Anneke Timmermans, University of Groningen, Netherlands; Esther Hartman, University Medical Center Groningen / University of Groningen, Netherlands

Student Teachers' Beliefs about Digital-enriched Inclusive Teaching and Learning

Felix Bernet, PH Weingarten, Germany; Stefanie Schnebel, University of Education Weingarten, Germany

Session Q: 11

Time: 08:00-09:30

Location: UOM_R05

SINGLE PAPER: MATHEMATICS UNDERSTANDING AND ENGAGEMENT: MEASUREMENT ISSUES**Chair**

Elisabeth Höhne, Leibniz Universität Hannover, Germany

When to Measure? An Exploratory Study of the Predictive Validity of Student Ratings

sergios sergiou, University of Cyprus, Cyprus; Charalambos Charalambous, University of Cyprus, Cyprus

Using Longitudinal Data from a Digital Learning Environment to Predict Algebra Understanding

Markus Spitzer, Martin-Luther Universität Halle, Switzerland; Korbinian Moeller, Centre for Mathematical Cognition, School of Science, Loughborough University, Loughborough, United Kingdom, United Kingdom

Eye-tracking as a tool to study student cognitive engagement and attention in the math classroom

Miitta Järvinen, University of Jyväskylä, Finland; Joni Lämsä, University of Oulu, Finland; Raija Hämäläinen, University of Jyväskylä, Finland; Janne Roslöf, Åbo Akademi, Finland; Sami Lehesvuori, University of Jyväskylä, Finland; Lauri Kettunen, University of Jyväskylä, Finland

Effects of formative assessment on motivation via perceived competence support in 3rd graders

Larissa Aust, University of Münster, Germany; Birgit Schütze, University of Münster, Germany; Jan Hochweber, St. Gallen University of Teacher Education, Switzerland; Ralf Benölken, University of Wuppertal, Germany; Elmar Souvignier, University of Muenster, Germany

Session Q: 12

Time: 08:00-09:30

Location: UOM_R09

SINGLE PAPER: CRITICAL THINKING, TRUST IN SCIENCE AND SCIENTIFIC INQUIRY**Chair**

Katharina Asbury, Leibniz Institute for Science and Mathematics Education (IPN), Germany

Students' assessment of authentic pedagogy when learning to evaluate the trustworthiness of sources

Maartje van der Eem, University of Amsterdam, Netherlands; J.P. van Drie, University of Amsterdam, Netherlands; Saskia Brand-Gruwel, Zuyd, University of Applied Sciences, Netherlands; Carla Van Boxtel, University of Amsterdam, Netherlands

Belief updating when confronted with scientific evidence: Examining the role of trust in science

Tom Rosman, Leibniz Institute for Psychology (ZPID), Germany; Sianna Grösser, Leibniz Institute for Psychology (ZPID), Germany

Promoting evidence-informed reasoning in student teachers through peer feedback

Julia Hornstein, University of Augsburg, Germany; Martin Greisel, University of Augsburg, Germany; Johanna Ott, University of Augsburg, Germany; Anna Weidenbacher, University of Augsburg, Germany; Ingo Kollar, University of Augsburg, Germany

Mapping student goal plans to scientific inquiry learning behaviors during inquiry-based learning

Megan Wiedbusch, University of Central Florida, United States; Alex Goslen, North Carolina State University, United States; Dan Carpenter, North Carolina State University, United States; Roger Azevedo, University of Central Florida, United States

Session Q: 13

Time: 08:00-09:30

Location: AUTH_T202

SINGLE PAPER: EYE TRACKING AND GAZE**Chair**

Xiangyuan Feng, University of Groningen, Netherlands

Player profiles in a mathematics educational game based on eye gaze and game log data

Diana-Elena Gratie, University of Turku, Alexandru Ioan Cuza University of Iasi, Romania; Erno Lehtinen, University of Turku, Finland

What was I doing? Gaze-display feedback to support students' monitoring and learning in radiology

Ellen Kok, Utrecht University, Netherlands; Diederick Niehorster, Humanities Lab Lund, Sweden; Anouk van der Gijp, UMC Utrecht, Netherlands; Dik Rutgers, UMCU, Netherlands; William Auffermann, University of Utah, United States; Marieke van der Schaaf, UMCU, Netherlands; Liesbeth Kester, Utrecht University, Netherlands; Tamara Van Gog, Utrecht University, Netherlands

Uncovering learning from video: Cued-retrospective Reporting vs. Concurrent-Retrospective Reporting

Marijn Gijssen, University of Antwerp, Belgium; Charlotte Van Tricht, University of Antwerp, Belgium; Leen Catrysse, Open Universiteit, Department of Online Learning and Instruction, Belgium; Sven De Maeyer, Antwerp University, Belgium; David Gijbels, University of Antwerp, Belgium

Investigating student gaze synchrony in the classroom as indicator of student engagement

Babette Bühler, Hector Research Institute of Education Sciences and Psychology, Germany; Efe Bozkir, University of Tübingen, Germany; Patricia Goldberg, University of Tübingen, Germany; Peter Gerjets, Leibniz-Institut für Wissensmedien, Germany; Ulrich Trautwein, University of Tübingen, Germany; Enkelejda Kasneci, Technical University of Munich, Germany

Session Q: 14

Time: 08:00-09:30

Location: UOM_A02

SINGLE PAPER: COMPREHENSION OF TEXT AND GRAPHICS**Chair**

Ilias Karasavvidis, University of Thessaly, Greece

Ideally Easy and Scientific? Text Features, the Role of Reader Characteristics and Trustworthiness

Mark Jonas, Leibniz Institute for Psychology (ZPID), Germany; Martin Kerwer, Leibniz Institute for Psychology (ZPID), Germany; Anita Chasiotis, Leibniz Institute for Psychology (ZPID), Germany; Tom Rosman, Leibniz Institute for Psychology (ZPID), Germany

Knowledge revision during reading – do pictures reduce the activation of outdated information?

Pauline Frick, Leibniz-Institut für Wissensmedien (IWM), Germany; Panayiota Kendeou, University of Minnesota, United States; Anne Schueler, Leibniz-Institut für Wissensmedien, Germany

Exploring students' use of self-constructed diagrams when writing answers to test questions

Emmanuel Manalo, Kyoto University, Japan; Mari Fukuda, Simon Fraser University, Canada

When is a scientist perceived to be credible? Trust and expertise in socio-scientific domains

Victoria Johnson, University of Minnesota, United States; Rina Harsch, University of Minnesota, United States; Panayiota Kendeou, University of Minnesota, United States

Session Q: 15

Time: 08:00-09:30

Location: UOM_A08

SINGLE PAPER: EVOLVING CORE PRACTICES IN TEACHER EDUCATION**Chair**

Hege Hermansen, Oslo Metropolitan University, Norway

Comparing Core Practices and Entrustable Professional Activities in Teacher and Medical Education

Marieke van der Schaaf, University Medical Center Utrecht / Utrecht University, Netherlands; Martine van Rijswijk, Utrecht University, Netherlands; Jan van Tartwijk, Utrecht University, Netherlands

At the Core of Core Practices: Conceptual Knowledge as an Enabling Factor for Successful Teaching

Julia Kienzler, Universität Freiburg, Germany; Tim M. Steininger, University of Freiburg, Germany; Thamar Voss, University of Freiburg, Germany; Joerg Wittwer, University of Freiburg, Germany

A Learning Trajectory for Preservice Science Teacher Eliciting and Interpreting Student Thinking

Courtney Bell, University of Wisconsin, United States; Mark Olson, University of Wisconsin-Madison, United States

Dilemma Managing as a Core Practice in Teaching

Roland Ebert-Glang, Albert-Ludwigs-University Freiburg, Germany; Ai Miyamoto, University of Freiburg, Germany; Matthias Nückles, University of Freiburg, Germany

ANNOTATIONS:

PLEASE NOTE THAT THIS SESSION ROOM HAS CHANGED FROM AUTH_TE1 TO UOM_A08.

Session Q: 16

Time: 08:00-09:30

Location: UOM_A04

SINGLE PAPER: EDUCATION FOR SUSTAINABLE DEVELOPMENT**Chair**

Christine Edwards-Groves, Griffith University, Australia

Future-oriented science education building sustainability competencies

Antti Laherto, University of Helsinki, Finland; Tapio Rasa, University of Helsinki, Finland; Lorenzo Miani, University of Bologna, Alma Mater Studiorum, Italy; Sibel Erduran, University of Oxford, United Kingdom; Olivia Levrini, University of Bologna, Italy

Education in the Anthropocene.

Denis Francesconi, University of Vienna, Austria

How teachers (can) make a difference for students' development of sustainability competencies

Katja Scharenberg, University of Education Freiburg, Germany; Eva-Maria Waltner, University of Education Freiburg, Germany; Christoph Mischo, University of Education Freiburg, Germany; Werner Rieß, PH Freiburg, Germany

FridaysForFuture as its Pedagogical Function. An Enactive Network for Sustainable Development.

Denis Francesconi, University of Vienna, Austria; Evi Agostini, University of Vienna, Austria

Session Q: 17

Time: 08:00-09:30

Location: UOM_A11

SINGLE PAPER: TEACHERS' WELL-BEING: ASSOCIATIONS WITH TEACHER- AND STUDENT-RELATED VARIABLES**Chair**

Sheeza Mahak, Loughborough University, United Kingdom

Teachers' epistemic theories and their relations to work-related wellbeing in five countries

Heidi Lammassaari, University of Helsinki, Finland; Lauri Hietajärvi, University of Helsinki, Finland; Rekar Abdulhamed, University of Helsinki, Finland; Markus Talvio, University of Helsinki, Finland; Kirsti Lonka, University of Helsinki, Finland

Development and interplay in teachers' self-regulation and well-being: an intervention study

Christine Wolfgramm, University of Teacher Education Zurich, Switzerland; Simone Berweger, Zurich University of Teacher Education, Switzerland; Zippora Bühner, Zurich University of Teacher Education, Switzerland; Andrea Keck Frei, Zurich University of Teacher Education, Switzerland; Christine Bieri Buschor, Zurich University of Teacher Education, Switzerland

Student Engagement and Teacher Wellbeing: A Longitudinal Examination of Within-Person Effects

Aleksandra Huic, Faculty of Humanities and Social Sciences, University of Zagreb, Croatia; Irena Buric, University of Zadar, Croatia; Izabela Soric, University of Zadar, Croatia

This Student Makes me Feel Burnt Out: Student-Specific Self-Efficacy, Classroom Demands, and Burnout

Annika Koch, University of Bonn, Germany; Fani Lauermann, University of Bonn, Germany

Session Q: 18

Time: 08:00-09:30

Location: AUTH_DC2

SINGLE PAPER: COGNITIVE DEVELOPMENT AND LEARNING IN EARLY CHILDHOOD**Chair**

Ute Sproesser, PH Ludwigsburg, Germany

Developmentally appropriate learning: the adaptation of Ages and Stages Questionnaire-3 in Greek

María Koushiou, University of Nicosia, Cyprus; Stavros Trakoshis, Unicaf University, Cyprus, Cyprus; Nina Michael, University of Cyprus, Cyprus; Fofi Constantinidou, University of Cyprus, Cyprus; Panayiota Dimitropoulou, University of Crete, Greece; Alexandra Klimentopoulou, Institute of Child Health, Greece; Antonis Jossif, "Paedi" Center for Specialized Pediatrics, Cyprus

No evidence that playing a number line game improves numerical skills: a randomised controlled trial

Ella James-Brabham, Loughborough University, United Kingdom; Tim Jay, Loughborough University, United Kingdom; Francesco Sella, Loughborough University, United Kingdom

Talk Matters in Shared Reading: The Role of Verbal Participation in Listening Comprehension

Janne Lepola, Univ. of Turku, Finland; Anu Kajamies, University of Turku, Finland; Molly Fuller Collins, Vanderbilt University, Department of Teaching and Learning, United States; Eero Laakkonen, University of Turku, Finland

Long-term effects of the home literacy environment on reading development

Minna Torppa, University of Jyväskylä, Finland; Kati Vasalampi, University of Jyväskylä, Finland; Pekka Niemi, University of Turku, Finland; Kenneth Eklund, University of Jyväskylä, Finland

Session Q: 19

Time: 08:00-09:30

Location: UOM_A13

SINGLE PAPER: TEACHERS' ATTITUDES AND BELIEFS ABOUT TEACHING AND ASSESSMENT**Chair**

David Zamorano, Universidad de Deusto, Spain

Medical teachers' beliefs about teaching and assessment: effects on challenges and teaching quality

Javier Fernández, Universidad de Leon, Spain; Ernesto Panadero, Universidad Deusto, Spain; Eneko Balerdi, Universidad de Deusto, Spain; Gaizka Camarón Alonso, Universidad de Deusto, Spain; Elena Auzmendi, Universidad de Deusto, Spain; Lucía Barrenetxea-Mínguez, University of Deusto, Spain

Development and validation of a questionnaire on teachers' conceptions of Assessment Literacy.

Kitty Meijer, HU University of Applied Sciences Utrecht; Open University of the Netherlands, Netherlands; Liesbeth Baartman, University of Applied Sciences Utrecht, Netherlands; Marjan Vermeulen, Heerlen Open Universiteit, Netherlands; Elly de Bruijn, Hogeschool Utrecht / OU, Netherlands

Development of elementary teachers' beliefs about history and history teaching in a PD-programme

Yolande Potjer, University of Amsterdam, Netherlands; Marjolein Dobber, Vrije Universiteit Amsterdam, Netherlands; Carla Van Boxtel, University of Amsterdam, Netherlands

Teachers Trust Scientific Evidence - Especially if it Confirms Their Beliefs

Kirstin Schmidt, University of Education Karlsruhe, Germany; Tom Rosman, Leibniz Institute for Psychology (ZPID), Germany; Colin Cramer, Eberhard Karls Universität Tübingen, Germany; Kris-Stephen Besa, Universität Münster, Germany; Samuel Merk, PH Karlsruhe, Germany

Session Q: 20

Time: 08:00-09:30

Location: UOM_R02

POSTER PRESENTATION: COMPUTER-ASSISTED LEARNING IN STUDENTS AND TEACHERS**Chair**

Jule Krüger, University of Potsdam, Germany

Teachers' and students' acceptance of digital personalised learning: a case study in Flanders.

Ine Windey, KU Leuven, Belgium; Stefanie Vanbecelaere, KU Leuven, Belgium; Fien Depaepe, KU Leuven, Belgium

Designing for human-AI collaboration: the effects of elaborateness and adaptability of explanations

Lenka Schnaubert, University of Nottingham, United Kingdom; Lydia Harbarth, University of Duisburg-Essen, Germany; Cora Weisenberger, Universität Duisburg-Essen, Germany; Daniel Bodemer, University of Duisburg-Essen, Germany

Training teachers to promote self-regulated learning with digital media in the classroom

Sabrina Reith, Technical University of Munich, Germany; Maria Bannert, Technical University of Munich (TUM), Germany

Enhancing lasting learning by generative drawing through integration of retrieval practice

Seokyoung Kim, Ruhr University Bochum, Institute of Educational Research, Germany; Detlev Leutner, University of Duisburg-Essen, Germany; Philipp Schmiemann, Biology Education Research and Learning Lab, University of Duisburg-Essen, Germany; Julian Roelle, Ruhr University Bochum, Germany

Learning to write in the digital age – differences between learning writing by hand or by computer

Vibeke Rønneberg, University of Stavanger, Norway; Wenke Mork Rogne, Volda University College, Norway; Eivor Finset Spilling, Volda University College, Norway; Per Henning Uppstad, Norwegian Reading Center, Norway; Siv M. Gamlem, Volda University College, Norway

When to pose questions to promote learning from a science text?

Ignacio Máñez, University of Valencia / Interdisciplinary Research Structure for Reading Research (ERI Lectura), Spain; Alba Rubio, University of Valencia / Interdisciplinary Research Structure for Reading Research (ERI Lectura), Spain; Marian Serrano-Mendizábal, University of Valencia / Interdisciplinary Research Structure for Reading (ERI Lectura), Spain; Eduardo Vidal-Abarca, Universidad de Valencia, Spain

The Complexities of Using Digital Social Networks in Teaching and Learning

Enilda Romero-Hall, University of Tennessee-Knoxville, United States; Lina Gomez-Vasquez, The University of Tampa, United States; Laila Forstmane, University of Tampa, United States; Caldeira Ripine, University of Tampa, United States; Carolina Dias da Silva, University of Tampa, United States

Session Q: 21

Time: 08:00-09:30

Location: UOM_R01

POSTER PRESENTATION: PRE-SERVICE AND EARLY CAREER TEACHERS: MOTIVATIONAL, AFFECTIVE AND LEARNING PROCESSES**Chair**

Henrik Lindqvist, Linköping University, Sweden

The impact of epistemic beliefs and emotions on student teachers' views about educational research

Gillian Peiser, Liverpool John Moores University, United Kingdom

Promoting preservice teachers' reflection with training using the critical incident technique

Veronika Anselmann, University of Education Schwäbisch Gmünd, Germany

Effects of epistemic emotions on pre-service teachers' MCK and MPCK

Robin Göller, Leuphana University Lüneburg, Germany; Lars Jenßen, Humboldt-Universität zu Berlin, Germany; Katja Eilerts, Humboldt-Universität zu Berlin, Germany; Michael Besser, Leuphana Universität Lüneburg, Germany

The role of health literacy and occupational self-regulation for teacher trainees' well-being

Kira Elena Weber, Leuphana University Lüneburg, Germany; Elena Hohensee, Leuphana Universität Lüneburg, Germany; Stephan Schiemann, Leuphana Universität Lüneburg, Germany

Complex requirement situations - learning opportunities for student teachers

Liana Pirovino, Pädagogische Hochschule Zürich, Switzerland; Annelies Kreis, University of Teacher Education Lucerne (PH Luzern), Switzerland

Personality traits as determinants of early-career teachers' occupational well-being

Josip Šabić, Institute for Social Research in Zagreb, Croatia; Dora Petrović, Institute for Social Research in Zagreb, Croatia

Session Q: 22

Time: 08:00-09:30

Location: UOM_R03

POSTER PRESENTATION: SELF-REGULATED LEARNING AND BEHAVIOUR**Chair**

Jean-Marc Meunier, Université Paris 8, France

Effects of students' metacognition on teacher judgments, and school track decisions

Markus Neuwenschwander, University of Applied Sciences and Arts Northwestern Switzerland, Switzerland; Sog Yee Mok, University of Applied Sciences and Arts Northwestern Switzerland PH (FHNW), Switzerland; Kathrin Lockl, Leibniz Institute for Educational Trajectories (LIfBi), Germany

Analyzing Self-Regulated Learning of Secondary School Students

Shruti Athavale, Technical University of Munich, Germany; Lyn Lim, Technical University of Munich, Germany; Maria Bannert, Technical University of Munich (TUM), Germany

An in-depth analysis of students' approaches to transfer of trained self-regulated learning skills

Jane Piepenbosch, Utrecht University, Netherlands; Gesa van den Broek, Utrecht University, Netherlands; Vincent Hoogerheide, Utrecht University, Netherlands; Ewa Miedzobrodzka, Utrecht University, Netherlands; Tamara Van Gog, Utrecht University, Netherlands

Not motivated - How regulation of learning builds up students' will to learn

Hanna Jarvenoja, University of Oulu, Finland; Tiina Susanna Törmänen, University of Oulu, Finland

Sequential patterns between SRL processes and essay data in k-12 students.

Inti Bistolfi, Radboud University, Netherlands; Susanne de Mooij, Radboud University, Netherlands; Joep van der Graaf, Radboud University, Netherlands; Inge Molenaar, Radboud University, Netherlands

Learning how to Learn through Student-Engaged Design (LhL-SED): Effects on Learning and Engagement

Shannon King, George Mason University, United States; Haley McKeen, George Mason University, United States; Anastasia Kitsantas, George Mason University, United States; Beth Hosek, George Mason University, United States; Sahar Wahidi, George Mason University, United States; Asuka Nuwere, George Mason University, United States; Jerry Putt, George Mason University, United States; Roy Echeverria, George Mason University, United States; Jack Belkin, George Mason University, United States

The relation between the quality of university students' goal-setting and self-regulation.

Heleen van Ravenswaaij, UMC Utrecht, Netherlands

Session Q: 23

Time: 08:00-09:30

Location: UOM_GYM

ROUNDTABLE: SELF-REGULATED LEARNING AND BEHAVIOUR**Chair**

Risto Hotulainen, University of Helsinki, Finland

Instructional knowledge: On an empirical road towards conceptual clarification

Morane Stevens, KU Leuven - University of Leuven, Belgium; Jan Elen, KU Leuven, Belgium

An intraindividual study to how students regulate their motivation across a Bachelor course

Linda Zenger, University Utrecht, Netherlands; Barbara Flunger, Utrecht University, Netherlands; Tamara Van Gog, Utrecht University, Netherlands

Building bridges between theory and automated methods to study collaborative learning interactions

Kateryna Zabolotna, University of Oulu, Finland, Finland; Jonna Malmberg, University of Oulu, Finland; Daniel Spikol, University of Copenhagen, Denmark

Frequencies and effects of academic comparisons in everyday life

Alexandra Petrak, University of Koblenz, Germany; Jens Möller, Kiel University, Germany; Friederike Helm, Kiel University, Germany; Fabian Wolff, Universität of Koblenz, Germany

Session R: 1

Time: 09:45-11:15

Location: UOM_CH

INVITED SYMPOSIUM: UNDERSTANDING AND ALLEVIATING DIFFICULTIES IN SCIENCE LEARNING: AN INTRA-INDIVIDUAL PERSPECTIVE**Chair**

Garvin Brod, DIPF | Leibniz Institute for Research and Information in Education, Germany

Discussant

Doug Lombardi, University of Maryland, College Park, United States

Does multiplication always make bigger? Exploring conceptual change in NanoRoboMath digital game

Tomi Kärki, University of Turku, Finland; Minna Hannula-Sormunen, University of Turku, Department of Teacher Education, Finland; Hilma Halme, University of Turku, Department of Teacher Education, Finland; Erno Lehtinen, University of Turku, Finland; Jake McMullen, University of Turku, Finland

Thought experiments as a tool for teaching scientific concepts

Igor Bascandzjev, Harvard Graduate School of Education, United States; Caren Walker, University of California, San Diego, United States; Elizabeth Bonawitz, Harvard Graduate School of Education, United States

Predicting promotes revision of misconceptions: Evidence from Bayesian models and pupillary surprise

Garvin Brod, DIPF | Leibniz Institute for Research and Information in Education, Germany; Maria Theobald, DIPF | Leibniz Institute for Research and Information in Education, Germany; Joseph Colantonio, Harvard Graduate School of Education, United States; Igor Bascandzjev, Harvard Graduate School of Education, United States; Elizabeth Bonawitz, Harvard Graduate School of Education, United States

What happens to conceptual knowledge during schooling? A Bayesian Hierarchical Diffusion Model

Peter Edelsbrunner, ETH Zurich, Switzerland; Henrik Singmann, University College London, United Kingdom; Denis Dumas, University of Georgia, United States; Gidon Frischkorn, University of Zurich, Switzerland

ANNOTATIONS:
SIG 3 INVITED SYMPOSIUM

Session R: 2

Time: 09:45-11:15

Location: AUTH_CH

INVITED SYMPOSIUM: ROLES AND NUANCES OF THEORETICAL WORK IN DIFFERENT DOMAINS OF EDUCATIONAL RESEARCH**Chair**

Nina Bonderup Dohn, University of Southern Denmark, Denmark

Organiser

Alexandra Nordström, University of Helsinki, Finland

Discussant

Giuseppe Ritella, University of Campania Luigi Vanvitelli, Italy

Longitudinal social networks: Towards a better understanding of selection and influence mechanisms

Jasperina Brouwer, University of Groningen, Netherlands; Dominik E. Froehlich, University of Vienna, Austria; Carlos de Matos Fernandes, University of Groningen, Netherlands; Marc Sarazin, University of Edinburgh, United Kingdom

Some criteria for good theories, illustrated with research on moral and democratic education

Jean-Luc Patry, Paris-Lodron University Salzburg, Austria

Nothing so practical as a good theory? Studying hybridizations of learning

Larika Bronkhorst, Utrecht University, Netherlands; Sanne Akkerman, Utrecht University, Netherlands

Dialogic and Argumentative Theoretical Foundations for Designing Educational Technology

Claire Polo, ECP Laboratory, France; Rupert Wegerif, University of Cambridge, United Kingdom

ANNOTATIONS:
SIG 25 INVITED SYMPOSIUM

Session R: 3

Time: 09:45-11:15

Location: AUTH_DC1

SYMPOSIUM: HIGH MATHEMATICS ACHIEVEMENT: RECENT ADVANCES AND CHALLENGES IN UNDERSTANDING ITS MECHANISMS**Chair**

Roland Grabner, University of Graz, Austria

Organiser

Bert De Smedt, KU Leuven, Belgium

Discussant

Michael Schneider, University of Trier, Germany

Can cognitive abilities before the start of school predict later high mathematics achievement?

Bert De Smedt, KU Leuven, Belgium; Merel Bakker, KU Leuven, Belgium; Joke Torbeyns, KU Leuven, Belgium; Lieven Verschaffel, KU Leuven, Belgium

The Role of Need for Cognition in Knowledge Acquisition in Mathematics in Regular and Gifted Classes

Franzis Preckel, University of Trier, Germany; Julia Matthes, University of Trier, Germany

How can we characterise high-achieving students in advanced school mathematics?

Simona Daguati, ETH Zurich, Switzerland; Elsbeth Stern, ETH Zurich, Switzerland

The role of mathematical expertise for memory and creativity

Michaela A. Meier, Educational Neuroscience, Institute of Psychology, University of Graz, Austria; Stephan Vogel, University of Graz, Austria; Roland Grabner, University of Graz, Austria

Session R: 4

Time: 09:45-11:15

Location: UOM_CR

INVITED SYMPOSIUM: SITUATION- AND CONTEXT-SPECIFICITY OF MOTIVATION AND EMOTIONS**Chairs**

Hanna Jarvenoja, University of Oulu, Finland; Hanna Gaspard, TU Dortmund University, Germany

Discussants

Hanke Korpershoek, University of Groningen, Netherlands; Fani Lauermann, University of Bonn, Germany

A Complex Dynamic Systems Perspective on Situated Motivation and Emotion: Implications for Research

Avi Kaplan, Temple University, United States; Joseph Eisman, Temple University, United States; Joanna Garner, Old Dominion University, United States; Stephen Whitney, University of Missouri/Columbia, United States

Student- and Task-Specific Factors Influence How Personalized Math Learning Affects Outcomes

Matthew Bernacki, University of North Carolina at Chapel Hill, United States; Candace Walkington, Southern Methodist University, United States; Vanessa W. Vongkulluksn, University of Nevada Las Vegas, United States

Using Contextual and Situational Methodologies to Investigate Student Emotion and Motivation

Kirsti Lonka, University of Helsinki, Finland; Katariina Salmela-Aro, Helsinki University, Finland

How Can Well-Being Research in Education Benefit from a Context-Specific Approach?

Tina Hascher, University of Bern, Institute of Educational Science, Switzerland

ANNOTATIONS:
SIG 8 INVITED SYMPOSIUM

Session R: 5

Time: 09:45-11:15

Location: UOM_A02

SYMPOSIUM: WHAT IS A PHD WORTH BEYOND ACADEMIA? IMPACT OF THE DISCIPLINARY FIELD**Chair**

Isabelle Skakni, University of Applied Sciences and Arts Western Switzerland, Switzerland

Discussant

Montserrat Castelló, Ramon Llull University, Spain

Ph.D. holders beyond academia as knowledge brokers: Disciplinary-based differences

Marina García-Morante, Blanquerna, Universitat Ramon Llull, Spain; Montserrat Castelló, Ramon Llull University, Spain; Anna Sala Bubaré, Ramon Llull University, Spain

What is a doctorate worth for non-academic employers?

Neda Bebiroglu, Observatory of Research and Scientific Careers-F.R.S.-FNRS, Belgium

Valuing the PhD degree in non-academic workplaces: PhD holders' and employers' perceptions

Michaël Parmentier, University of Applied Sciences and Arts Western Switzerland, Switzerland; Nata Kereselize, University of Applied Sciences and Arts Western Switzerland, Switzerland; Laurence Fedrigo, University of Lausanne, Switzerland; Kelsey Inouye, University of Oxford, United Kingdom; Isabelle Skakni, University of Applied Sciences and Arts Western Switzerland, Switzerland

How is holding a PhD perceived outside academia? Stereotyping of PhD holders in the French context

Alexandre Bran, Laboratory of Interdisciplinary studies on the Doctorate, Adoc Talent Management, France; Nicolas Lopes, Adoc Talent Management, France; Eric Bonetto, Adoc Talent Management, France

Session R: 6

Time: 09:45-11:15

Location: AUTH_T002

SYMPOSIUM: EVIDENCE-INFORMED REASONING OF PRE-SERVICE TEACHERS**Chair**

Martijn Meeter, Vrije Universiteit Amsterdam, Netherlands

Organiser

Izaak Dekker, Amsterdam University of Applied Sciences (AUAS), Netherlands

Discussant

Ingo Kollar, University of Augsburg, Germany

Not useful to inform teaching? Pre-service teachers' skeptical beliefs about education science

Tamar Voss, University of Freiburg, Germany

The scientific impotence excuse in education: Disentangling potency and pertinence assessments

Holger Futterleib, University of Erfurt, Germany; Eva Thomm, University of Erfurt, Germany; Johannes Bauer, University of Erfurt, Germany

Unpacking pre-service teachers' beliefs and reasoning: A scenario-based approach

Leila Ferguson, Kristiania University College, Norway; Ivar Bråten, University of Oslo, Norway

Evidence-based and -informed education: Objections and future directions

Izaak Dekker, Amsterdam University of Applied Sciences (AUAS), Netherlands; Martijn Meeter, Vrije Universiteit Amsterdam, Netherlands

Session R: 7

Time: 09:45-11:15

Location: AUTH_DC2

SYMPOSIUM: PROBLEM-SOLVING PRIOR TO INSTRUCTION AS AN EXAMPLE OF COMPOSITE INSTRUCTIONAL DESIGNS**Chairs**

Katharina Loibl, University of Education Freiburg, Germany;
Timo Leuders, University of Education Freiburg, Germany

Discussant

Ido Roll, Technion - Israel Institute of Technology, Israel

Open problem-solving, working on solved problems or fading to prepare for learning from instruction?

Katharina Ockl, University of Erfurt, Germany; Christina Schulz, University of Freiburg, Institute of Psychology, Germany; Lennart Schalk, PH Schwyz, Switzerland; Inga Glogger-Frey, University of Erfurt, Germany

The role of students' breadth of prior knowledge activation in preparation for learning

Charleen Brand, Ruhr University Bochum, Institute of Educational Research, Germany; Katharina Loibl, University of Education Freiburg, Germany; Nikol Rummel, Ruhr University Bochum, Germany

Formative feedback timing problem-solving in virtual environment simulations for medical education

Christian Fässler, Swiss Federal Institute of Technology ETH Zurich, Switzerland; Tanmay Sinha, Professorship for Learning Sciences and Higher Education, ETH Zurich, Switzerland; Christian Schmied, ETH Zurich, Switzerland; Jörg Goldhahn, ETH Zurich, Switzerland; Manu Kapur, ETH Zurich, Switzerland; Charlotte Müller, ETH Zurich, Switzerland

Problem-solving prior to instruction in motor learning – the case of javelin throwing

Christian Leukel, University of Education Freiburg, Germany; Katharina Loibl, University of Education Freiburg, Germany

Session R: 8

Time: 09:45-11:15

Location: UOM_A03

SYMPOSIUM: TEACHER PROFESSIONAL DEVELOPMENT: DIGITAL SIMULATION, VIDEOS AND PEER LEARNING**Chair**

Inga Staal Jensen, University of Oslo, Norway

Organisers

Katrine Nesje, University of Oslo, Norway; Toril Aagaard, University of Southeast Norway, Norway

Discussant

Sigrun K. Ertesvag, University of Stavanger, Norway

CANCELLED: Using immersive virtual reality simulation for and with students (...)

Lynn Dittrich, University of South-Eastern Norway, Norway

Improving teaching skills with simulation training: Pre-service teachers' retrospect

Marcus Samuelsson, Department of Behavioural science and learning, Sweden; Anja Thorsten, Department of Behavioural Sciences and Learning, Sweden; Cecilia Sveider, Department of Behavioural Sciences and Learning (IBL), Sweden; Joakim Samuelsson, IBL, Sweden

The use of authentic practice videos in peer-mentoring of preservice teachers

Katrine Nesje, University of Oslo, Norway; Torunn Strømme, University of Oslo, Norway

Peer-feedback on classroom-videos: A hope for coherence in teacher education?

Toril Aagaard, University of Southeast Norway, Norway; Lene Joensen Kjær, University of South-eastern Norway, Norway

Session R: 9

Time: 09:45-11:15

Location: AUTH_T102

SINGLE PAPER: READING AND WRITING DIFFICULTIES**Chair**

Freya Winterle, University of Vienna, Germany

Identification of parental dyslexia and its influence on how children's dyslexia is predicted

Daria Khanolainen, University of Jyväskylä, Finland; Jenni Salminen, University of Jyväskylä, Finland; Kenneth Eklund, University of Jyväskylä, Finland; Marja-Kristiina Lerkkanen, University of Jyväskylä, Finland; Minna Torppa, University of Jyväskylä, Finland

The Relation between Spelling and IQ: A meta-analytic review

Sietske van Viersen, Utrecht University, Netherlands; Elise de Bree, Utrecht University, Netherlands; Jolijn Vanderauwera, UC Louvain, Belgium

Comparison of different settings in the support of graphomotor skills in first graders

Judith Sägesser, University of Teacher Education Bern, Switzerland; Michelle Maurer, University for Teacher Education Berne, Switzerland; Lidia Jana Truxius, PHBern, University of Teacher Education, Switzerland; Joséphine Schwery, University for Teacher Education Berne, Switzerland; Michael Eckhart, University of Teacher Education Bern, Switzerland

Session R: 10

Time: 09:45-11:15

Location: UOM_A13

SINGLE PAPER: WELL-BEING IN UNIVERSITY STUDENTS**Chair**

Hinke Endedijk, Leiden University, Netherlands

Being well in academia: A systematic literature review on operationalizing wellbeing.

Aisha Miren Iqbal Ruiz, Maastricht University, Netherlands; Wim Gijsselaers, Maastricht University, Netherlands; Simon Beausaert, Maastricht University, Netherlands; Inken Gast, Maastricht University, Netherlands

Motivational orientation profiles and study well-being among higher education students

Satu Laitinen, University of Turku: Department of Teacher Education, Finland; Ari Kaukiainen, University of Turku, Department of Psychology and Speech-Language Pathology, Finland; Tiina Tuominen, University of Turku, Study and Work Well-being Services, Finland

Supporting student reflection by using a survey on learning processes and wellbeing

Anne Haarala-Muhonen, University of Helsinki, Finland; Mirja Ruohoniemi, University of Helsinki, Finland; Anna Parpala, University of Helsinki, Finland

University students' study progress and study success related to their well-being profiles

Elisa Vilhunen, University of Helsinki, Finland; Noona Kiuru, University of Jyväskylä, Finland; Anne Mäkikangas, Tampere University, Finland; Kati Vasalampi, University of Jyväskylä, Finland; Johanna Rantanen, University of Jyväskylä, Finland

Construct Validation of an Instrument to Measure Student Well-Being in Academic Settings

Ramin Rostampour, University of Victoria, Canada; Meg Kapil, University of Victoria, Canada; Allyson Hadwin, University of Victoria, Canada

Session R: 11

Time: 09:45-11:15

Location: AUTH_T202

SINGLE PAPER: BELIEFS OF EARLY CHILDHOOD EDUCATORS AND PRIMARY SCHOOL TEACHERS**Chair**

Ma. Jenina N. Nalipay, The Chinese University of Hong Kong, Hong Kong

Profiling Pre-service Early Childhood Teachers' Perceptions of Learning Management Systems

Rohnii Tse, Yew Chung College of Early Childhood Education, Hong Kong; Elaine Lau, Yew Chung College of Early Childhood Education, Hong Kong; Fred Chan, Yew Chung College of Early Childhood Education, Hong Kong

Pre-service primary school teachers' beliefs on interactive book reading in multilingual contexts

Elina Decraene, Ghent University, Belgium; Hilde Van Keer, Ghent University, Belgium

Preschool Teachers' Beliefs Towards the Importance of Diagnostics in Early Science Learning

Mirjam Steffensky, University of Hamburg, Germany; Laura Venitz, University of Koblenz-Landau, Germany; Miriam Leuchter, RPTU Landau, Germany; Ilonca Hardy, Goethe-Universität Frankfurt, Germany; Anika Bürgermeister, University of Leipzig, Germany; Katharina Junge, University of Hamburg, Germany; Henrik Saalbach, University of Leipzig, Germany

When judgements are biased by students' immigrant background, intervention can counteract

Christin Laschke, Leibniz-Institute for Science Education (IPN), Germany; Bettina Roesken-Winter, Humboldt-Universität zu Berlin, Germany; Lars Jenßen, Humboldt-Universität zu Berlin, Germany

Session R: 12

Time: 09:45-11:15

Location: AUTH_TE2

SINGLE PAPER: INCLUSIVE EDUCATION**Chair**

Angela Stewart, University of Pittsburgh, United States

Leadership in inclusive ECEC cultures

Kati Sormunen, University of Helsinki, Finland; Raisa Ahtiainen, University of Helsinki, Finland; Arto Kallioniemi, University of Helsinki, Finland; Tapio Lahtero, University of Helsinki, Finland; Anni Loukomies, University of Helsinki, Finland

Co-teaching as an inclusive approach in pre-schools – a Finnish case study

Christel Sundqvist, Åbo Akademi University, Finland; Kristina Ström, Åbo Akademi University, Finland

The composition of pre-service teacher teams and children's competencies in inclusive education

Frank Hellmich, Paderborn University, Germany; Fabian Hoya, Paderborn University, Germany; Jan R. Schulze, Paderborn University, Germany; Eva Blumberg, University of Paderborn, Germany

Do we preach what we are? Studies on the antecedents of teachers' instructional goals

Panagiotis Varsamis, University of Macedonia, Greece; MELPOMENI TALLIDOU, University of Macedonia, Greece; Georgios Katsanis, Experimental Senior High School of University of Macedonia, Thessaloniki, Greece, Greece

Session R: 13

Time: 09:45-11:15

Location: UOM_A08

SINGLE PAPER: LARGE-SCALE ASSESSMENTS OF SCHOOL AND TEACHER EFFECTIVENESS**Chair**

Benjamin Heintz, Leibniz University Hannover, Germany

The relationship between quality and equity in education at system level: Secondary analyses of PISA

Leonidas Kyriakides, University of Cyprus, Cyprus; Maria Eliophotou, University of Cyprus, Cyprus; Evi Charalambous, University of Cyprus, Cyprus

Differences between countries in guessing behavior in international large-scale assessments

Jonas Dockx, KU LEUVEN, Belgium; Rianne Janssen, KU LEUVEN, Belgium

ICT-skills of Flemish young adults according to PIAAC: the role of formal and non-formal education

Lisa Dewulf, Ghent University, Belgium; Lisse Van Nieuwenhove, Ghent University, Belgium; Fien De Smedt, Ghent University, Belgium; Bram De Wever, Ghent University, Belgium

Measuring an Essentially Contested Concept

Markus Alaffi, University of Uppsala, Sweden

ANNOTATIONS:

PLEASE NOTE THAT THIS SESSION ROOM HAS CHANGED FROM AUTH_TE1 TO UOM_A08.

Session R: 14

Time: 09:45-11:15

Location: UOM_R09

SINGLE PAPER: LEARNING ANALYTICS AND FEEDBACK**Chair**

Lynn McAlpine, University of Oxford / McGill University, Canada

The Impact of Cognitive and Motivational Resources on Engagement with Automated Formative Feedback

Veronika Barkela, RPTU Kaiserslautern-Landau, Germany; Miriam Leuchter, RPTU Landau, Germany

Using Automated Individualized Feedback to Alter Learner Behavior in an Online Learning Environment

Carolin Hahnel, DIPF | Leibniz Institute for Research and Information in Education, Centre for International Student Assessment (ZIB), Germany; Beate Eichmann, DIPF | Leibniz Institute for Research and Information in Education, Centre for International Student Assessment (ZIB), Germany; Daniel Bengs, DIPF | Leibniz Institute for Research and Information in Education, Germany; Hendrik Drachler, DIPF | Leibniz Institute for Research and Information in Education, Germany; Frank Goldhammer, DIPF | Leibniz Institute for Research and Information in Education, Centre for International Student Assessment (ZIB), Germany

A Conceptual Framework of Learning Analytics Role in Feedback Practices in Higher Education

Seyyed Kazem Banihashem, Open University, Department of Online Learning and Instruction, Netherlands; Omid Noroozi, Wageningen University and Research Centre, Netherlands; Stan van Ginkel, Universiteit Utrecht / Hogeschool Utrecht, Netherlands; Leah P. Macdadyen, The University of British Columbia, Canada; Harm Biemans, Wageningen University, Netherlands

Does individual feedback on learning behavior derived from digital traces improve learning?

Carolin Hahnel, DIPF | Leibniz Institute for Research and Information in Education, Centre for International Student Assessment (ZIB), Germany; Daniel Bengs, DIPF | Leibniz Institute for Research and Information in Education, Germany; Daniel Biedermann, DIPF | Leibniz Institute for Research and Information in Education, Germany; George Ciordas-Hertel, DIPF | Leibniz Institute for Research and Information in Education, Germany; Beate Eichmann, DIPF | Leibniz Institute for Research and Information in Education, Germany; Julia Mendzheritskaya, Goethe-Universität Frankfurt, Germany; Julia Mordel, Goethe-University Frankfurt, Germany; Marc Winter, Goethe-University Frankfurt, Institute of Psychology, Germany; Monica Onofrei, Leibniz Institute for Educational Trajectories (LifBi), Germany; Ilka Wolter, Leibniz Institute for Educational Trajectories (LifBi), Germany; Cordula Artelt, Leibniz Institute for Educational Trajectories, Germany; Hendrik Drachler, DIPF | Leibniz Institute for Research and Information in Education, Germany; Holger Horz, Goethe-University Frankfurt, Institute of Psychology, Germany; Frank Goldhammer, DIPF | Leibniz Institute for Research and Information in Education, Centre for International Student Assessment (ZIB), Germany

Session R: 15

Time: 09:45-11:15

Location: UOM_R05

SINGLE PAPER: TEACHERS' (MIS)CONCEPTIONS AND JUDGEMENTS IN THE CLASSROOM**Chair**

Philipp Marten, Ruhr University Bochum, Germany

University teachers' conceptions on teaching and learning: a structural equation modeling study

Neea Heinonen, University of Helsinki, Finland; Nina Katajavuori, University of Helsinki, Finland; Eliina E. Ketonen, University of Helsinki, Finland; Mari Murtonen, University of Turku, Finland; Trang Nguyen, University of Turku / Faculty of Education, Finland; Ilona Södervik, University of Helsinki, Finland

The effects of deliberative vs. implemental mindsets on teacher judgements – an experimental study

Elif Özel, PH Freiburg, Germany; Katharina Loibl, University of Education Freiburg, Germany; Timo Leuders, University of Education Freiburg, Germany

Does irrelevant information reduce the quality of teacher judgments of student motivation?

Jan Beck, Psychology of Learning in Education and Instruction, University of Münster, Germany; Stephan Dutke, Psychology of Learning in Education and Instruction, University of Münster, Germany; Till Utesch, Department of Educational Sciences, University of Münster, Germany

Understanding Teachers' Perceptions of Representations in Elementary Science Classrooms

Cindy Hmelo-Silver, Indiana University, United States; Xintian Tu, Indiana University, United States; Joshua Danish, Indiana University, United States; Megan Humburg, Indiana University, United States; Meredith Park Rogers, Indiana University, United States; Adam Bell, Vanderbilt University, United States; Sarah Lee, Vanderbilt University, United States

Session R: 16

Time: 09:45-11:15

Location: UOM_R01

POSTER PRESENTATION: CRITICAL THINKING, ARGUMENTATION AND (PRE)-TEACHER PROFESSIONAL DEVELOPMENT**Chair**

Ruud Lelieur, University of Antwerp, Belgium

Collaborative problem solving and online inquiry: Skills, processes and neural basis

Päivi Häkkinen, University of Jyväskylä, Finland; Johanna Pöysä-Tarhonen, University of Jyväskylä, Finland; Shupin Li, University of Jyväskylä, Finland; Jarkko Hautala, Niilo Mäki Institute, Finland; Susannah Otieno-Leppänen, University of Jyväskylä, Finland; Otto Loberg, Bournemouth University, United Kingdom; Paavo Leppänen, University of Jyväskylä, Finland

Critical thinking in teacher education: A systematic review

Jarmila Bubikova-Moan, Oslo Metropolitan University, Norway; Leila Ferguson, Kristiania University College, Norway; Anette Andresen, Kristiania University College, Norway

Argumentative design capacity: post-practice reflection, more than instruction, makes a difference

Gabriel Fortes, Universidad Alberto Hurtado, Chile; Sylvia De Chiaro, Universidade Federal de Pernambuco, Brazil; Dayane Silva, Universidade Federal de Pernambuco, Brazil; Felipe Chaves, Universidade Federal de Pernambuco, Brazil; Nathalia Teofilo, Universidade Federal de Pernambuco, Brazil; Rodrigo dos Santos, Universidade Federal de Pernambuco, Brazil

The influence of guidance and on-the-fly scaffolding in scientific inquiry

Heide Sasse, RPTU Kaiserslautern-Landau, Germany; Miriam Leuchter, RPTU Landau, Germany; Timo Reuter, Rheinland-Pfälzische Technische Universität Kaiserslautern - Landau, Germany; Anke Maria Weber, University of Luxembourg, Luxembourg

Studying preservice teachers' evaluation of evidential support in arguments about educational topics

Andreas Lederer, University of Erfurt, Germany; Eva Thomm, University of Erfurt, Germany; Johannes Bauer, University of Erfurt, Germany

Lessons learned from applying Project-Based Learning: The Educator perspective

Tina Papatoma, Code University of Applied Sciences, Greece

Session R: 17

Time: 09:45-11:15

Location: UOM_R02

POSTER PRESENTATION: MATHEMATICS AND NUMERACY IN INSTRUCTION AND ASSESSMENT RESEARCH**Chair**

Vanessa A. Völlinger, Justus-Liebig-Universität Giessen, Germany

Learning with multiple solutions - more promising in homogeneous or in heterogeneous teams?

Cornelia S. Große, Johannes Kepler University Linz, Austria, Austria

Evaluation of initial arithmetic skills: adaptation and validation study of TEMA-3

RAQUEL WEBER, Universidade Federal do Rio Grande do Sul, Brazil; Fabiana de Miranda Rocha Luna, Universidade Federal do Rio Grande do Sul, Brazil; Luciana Vellinho Corso, Universidade Federal do Rio Grande do Sul (UFRGS), Brazil; Amanda Oliveira Meggiato, Universidade Federal do Rio Grande do Sul, Brazil

Pre-service teachers' diagnostic competences: Development of accuracy, sensitivity, and specificity

Stephanie Kron, Ludwig-Maximilians-Universität (LMU), Germany; Daniel Sommerhoff, Leibniz Institute for Science and Mathematics Education, Germany; Stefan Ufer, Ludwig-Maximilians-Universität (LMU), Germany

Assessing Critical Thinking of Mathematical Literacy

Kai-Lin Yang, National Taiwan Normal University, Taiwan; Chien-Heng Chen, Taipei Municipal Dali High School, Taiwan; Wan-Rou Wu, National Taiwan Normal University, Taiwan; Yun-Zu Chen, Taipei Municipal Nanhu High School, Taiwan

Screening early subitizing abilities in preschool classes – comparison of tests

Mona Holmqvist, Lund University, Sweden; Damon Tutunjian, Malmö university, Sweden; Catarina Wåsterlid, Malmö University, Sweden

Solving word problem: the choice of an algorithm depends on non mathematical world semantics

Jean-Pierre Thibaut, Université de Bourgogne / Lead - CNRS, France; Fatimah Alhashem, College of Arts & Sciences Gulf University for Science & Technology (GUST), Kuwait., Kuwait

Session R: 18

Time: 09:45-11:15

Location: UOM_GYM

ROUNDTABLE: CULTURAL DIVERSITY AND MINORITY STUDENTS**Chair**

Ulrich Ludewig, Institute for School Development Research, TU Dortmund University, Germany

Reducing Educational Inequality by Means of Equity Funding Policies? Findings from Germany

Denise Demski, Ruhr-University Bochum, Institute of Educational Sciences, Germany; Norbert Sendzik, Leibniz Institute for Educational Trajectories (LIfBi), Germany; Marcel Helbig, Leibniz Institute for Educational Trajectories (LIfBi), Germany; Gabriele Bellenberg, Ruhr-University Bochum, Institute of Educational Sciences, Germany

Reducing gender segregated educational choices with pedagogical work life visits

Jenni Kunnari, University of Oulu, Finland; Satu Kaleva, University of Oulu, Finland; Kati Ilkka, City of Oulu, Finland; Hanni Muukkonen, University of Oulu, Finland

Promoting Intercultural Group Work: Lecturers' Strategies, Self-Regulation and Required Support

Weiwei Li, University Groningen, Netherlands; Swati Vartak, University Groningen, Netherlands; Robert Coelen, University Groningen, Netherlands; Sabine Otten, University Groningen, Netherlands

Individualising Swedish for Immigrants: Tensions and innovations in teachers' professional practice

Dimitrios Papadopoulos, University of Gothenburg, Sweden

Session R: 19

Time: 09:45-11:15

Location: UOM_R08

WORKSHOP: A PRACTICAL APPROACH TO AUTHENTIC ASSESSMENT IN HIGHER EDUCATION**A Practical Approach to Authentic Assessment in Higher Education**

Debra McCormick, Monash University, Australia; Nell Kimberley, Monash University, Australia

Session R: 20

Time: 09:45-11:15

Location: AUTH_DC3

WORKSHOP: WHAT IS FAILURE ANYWAY? DEALING WITH UNCERTAINTY IN (THE REPLICABILITY OF) ADAPTIVE INSTRUCTION**What is failure anyway? Dealing with uncertainty in (the replicability of) adaptive instruction**

Nienke Smit, Utrecht University, Netherlands; Renske de Kleijn, UMC Utrecht, Netherlands; Jelte Wicherts, Tilburg University, Netherlands; Janneke van de Pol, Utrecht University, Netherlands

Session R: 21

Time: 09:45-11:15

Location: UOM_A11

ICT DEMONSTRATION: YELLOW-RED: PLAYFUL TABLET BASED EXECUTIVE FUNCTION TEST FOR CHILDREN BETWEEN 6 AND 12**Yellow-Red: Playful Tablet based executive function test for children between 6 and 12**

Ricardo Rosas Díaz, CEDEti-UC, Chile; Catalina Santa Cruz, Centro de Justicia Educacional, Chile; Victoria Espinoza, CEDEti-UC, Chile; Camila Martínez, Pontificia Universidad Católica de Chile, CIE 160007, Chile

Session R: 22

Time: 09:45-11:15

Location: UOM_A10

ICT DEMONSTRATION: ANIMATED VIDEOS IN SOCIAL SCIENCE DIDACTICS FOR PRE-SERVICE TEACHER EDUCATION**Animated videos in social science didactics for pre-service teacher education**

Frederik Heyen, University of Duisburg-Essen, Germany; Sabine Manzel, Universität Duisburg-Essen, Cote D'Ivoire

Session S: 1

Time: 12:00-13:30

Location: UOM_CH

INVITED SYMPOSIUM: NON-CONVINCING EFFECTS IN RESEARCH ON TEACHING QUALITY: REASONS AND POSSIBLE SOLUTIONS**Chairs**

Charalambos Charalambous, University of Cyprus, Cyprus; Anna-Katharina Praetorius, University of Zurich, Switzerland

Discussant

Alexander Renkl, University of Freiburg, Germany

Conceptualizing Teaching Quality: Problems, Prospects and a Proposed Way Forward

Charalambos Charalambous, University of Cyprus, Cyprus; Daniel Muijs, Queen's University Belfast, United Kingdom; Ariel Lindorff, University of Oxford, United Kingdom

Challenges in Conceptualizing the Outcomes and the Linkage between Outcomes and Teaching

Svenja Vieluf, Technische Universität Braunschweig, Germany; Alexander Naumann, Friedrich-Schiller-University Jena, Germany; Kirsti Klette, University of Oslo, Norway

Context Effects in Teaching Quality Research: Bringing a Complex Term Into Focus

Anna-Katharina Praetorius, University of Zurich, Switzerland; Benjamin Fauth, Institute for Educational Analysis and University of Tübingen, Germany; Armin Jentsch, University of Oslo, Norway; Stefan Keller, Zürich University of Teacher Education, Switzerland

Measuring Teaching Quality: Dilemmas and Tradeoffs

Richard Goellner, University of Tuebingen, Germany; Mark White, University of Oslo, Norway; Thilo Kleickmann, Kiel University, Germany

ANNOTATIONS:
SIG 18 INVITED SYMPOSIUM

Session S: 2

Time: 12:00-13:30

Location: AUTH_DC3

INVITED SYMPOSIUM: CREATIVE, INCLUSIVE AND EQUITABLE PLAY AND LEARNING ENVIRONMENTS: CHILDREN'S PARTICIPATION IN FOCUS**Chairs**

Heidi Harju-Luukkainen, University of Jyväskylä, Finland; Eva Staffans, Faculty of Education and Welfare Studies, Vasa, Finland

Discussant

Eva Staffans, Faculty of Education and Welfare Studies, Vasa, Finland

Young children's participation and voices in city planning

Terese Wilhelmssen, University of South-Eastern Norway, Norway; Steinar Ovreas, University of South-Eastern Norway, Norway; Simen Thorrud, University of South-Eastern Norway, Norway; Hege Roll-Hansen, University of South-Eastern Norway, Norway; Anne-Line Bjerknes, University of South-Eastern Norway, Norway

Teachers' perspectives on children's creativity in Swedish preschools

Valerie Margrain, Karlstad University, Sweden; Alexandra Guseva, Karlstad University, Sweden

Participation and inclusion on the margins: Disabled and gifted children in ECE

Valerie Margrain, Karlstad University, Sweden

Early childhood education teachers' views on children's participation during transitions

Eva Staffans, Faculty of Education and Welfare Studies, Vasa, Finland; Johanna Hirvi, Åbo Akademi University, Faculty of Education, Finland; Kaisa Pihlainen, University of Eastern Finland, Finland

ANNOTATIONS:
INVITED SYMPOSIUM OF THE NORDIC EDUCATIONAL RESEARCH ASSOCIATION (NFPF)

Session S: 3

Time: 12:00-13:30

Location: UOM_A03

SYMPOSIUM: NEW THEORETICAL AND METHODOLOGICAL PERSPECTIVES ON TEACHER PROFESSIONAL VISION**Chair**

Rebekka Stahnke, Leibniz Institute for Science and Mathematics Education, Germany

Discussant

Thorsten Scheiner, Institute for Learning Sciences and Teacher Education, Australia

Professional Vision and Teacher Noticing: Different pieces of the same puzzle?

Jennifer Richards, Northwestern University, United States; Miriam Sherin, Northwestern University, United States; Sarah Larison, Northwestern University, United States

Towards a Cognitive Theory of Visual Expertise: Methods of Inquiry

Andreas Gegenfurtner, University of Augsburg, Germany; Hans Gruber, University of Regensburg, Germany; Doris Holzberger, Technical University of Munich (TUM) & ZIB (Centre for International Student Assessment), Germany; Özün Keskin, University of Augsburg, Germany; Erno Lehtinen, University of Turku, Finland; Tina Seidel, Technische Universität München, Germany; Kathleen Stürmer, University of Tübingen, Germany; Roger Saljo, University of Gothenburg, Sweden

Visualizing Preservice Teachers' Descriptions of Noticed Tutoring Events with Epistemic Networks

Meg Farrell, Technische Universität München, Germany; Monika Martin, University of Education Freiburg, Germany; Alexander Renkl, University of Freiburg, Germany; Werner Rieß, PH Freiburg, Germany; Karen Könings, Maastricht University, Netherlands; Jeroen Van Merriënboer, Maastricht University, Netherlands; Tina Seidel, Technische Universität München, Germany

CANCELLED: Teacher Noticing Discourse: Understanding Mechanisms of Teacher Learning

Elizabeth van Es, University of California, Irvine, United States; Melissa Luna, West Virginia University, United States; Miray Tekkumru-Kisa, Florida State University, United States

Session S: 4

Time: 12:00-13:30

Location: AUTH_DC1

SYMPOSIUM: CLIMATE CHANGE – ADDRESSING KNOWLEDGE, ACTION AND HOPE**Chair**

Cecilia Lundholm, Stockholm University, Sweden

Organiser

Cecilia Lundholm, Stockholm University, Sweden

Discussant

Gale Sinatra, University of Southern California, United States

Scaffolded Instruction to Facilitate Learning about the Climate Crisis and Extreme Weather

Doug Lombardi, University of Maryland, College Park, United States; John Robertson, University of Maryland, United States; Nancy Gans, University of Maryland, College Park, United States; Joshua Jaffe, University of Maryland, United States

CANCELLED: Promoting action competence and hope in education for a sustainable future

MARIA OJALA, Örebro University, Sweden

Understanding the role of knowledge and action in combating climate change

Cecilia Lundholm, Stockholm University, Sweden; Anna Bendz, University of Gothenburg, Sweden; Caroline Ignell, Stockholm University, Sweden

A quality climate education in Victorian schools? A cross-case comparison of pre-university subjects

Karen Marangio, Monash University, Australia; Alan Reid, Monash University, Australia

Session S: 5

Time: 12:00-13:30

Location: UOM_A02

SYMPOSIUM: EXPLORING THE WHY?, WHAT?, AND HOW? OF STUDENT LEARNING IN CHALLENGE-BASED LEARNING**Chair**

Karolina Doulougeri, Eindhoven School of Education, Netherlands

Organisers

Kerstin Helker, Eindhoven University of Technology, Netherlands; Karolina Doulougeri, Eindhoven School of Education, Netherlands

Discussant

Kirsti Lonka, University of Helsinki, Finland

Creating the foundation for studying student learning in CBL – A heuristic framework

Jan Vermunt, Eindhoven University of Technology, Netherlands; Kerstin Helker, Eindhoven University of Technology, Netherlands; Jasmina Lazendic-Galloway, TU/e innovation Space, Eindhoven University of Technology, Netherlands; Isabelle Reymen, Eindhoven University of Technology, Netherlands; Miguel Bruns, Eindhoven University of Technology, Netherlands

Exploring participation motivation in Challenge-based learning using a mixed methods approach

Selina Michel, Technical University Munich, Germany; Manuel Förster, Technical University Munich, Germany

Understanding students' regulation of learning in Challenge-based courses

Karolina Doulougeri, Eindhoven School of Education, Netherlands; Gunter Bombaerts, Eindhoven University of Technology, Netherlands; Michael Bots, Eindhoven University of Technology, Netherlands; Jan Vermunt, Eindhoven University of Technology, Netherlands

Students' experiences with challenge based learning in interdisciplinary and international courses

Simon David, Ghent University, Belgium; Tijs Rotsaert, Ghent University, Belgium; Tammy Schellens, Ghent University, Belgium

Session S: 6

Time: 12:00-13:30

Location: AUTH_DC2

SYMPOSIUM: TOWARDS A PROCESS-PERSPECTIVE ON THE ROLE OF EMOTION IN ARGUMENTATION, DIALOGUE, AND REASONING**Chair**

Armin Weinberger, Saarland University, Germany

Organisers

Armin Weinberger, Saarland University, Germany; Claire Polo, ECP Laboratory, France; Kristine Lund, CNRS & Ecole Normale Supérieure de Lyon, France; Sara Ahola, University of Oulu, Finland; Hanna Jarvenoja, University of Oulu, Finland; Tiina Susanna Törmänen, University of Oulu, Finland; Jonna Malmberg, University of Oulu, Finland; Lena Aoyama Lawrence, Saarland University, Germany; Nikki Lobczowski, McGill University, Canada; Timothy Nokes, University of Pittsburgh, United States; Diane Litman, University of Pittsburgh, United States; Teresa Davison, University of Pittsburgh, United States; Adriana Kovashka, University of Pittsburgh, United States; Erin Walker, University of Pittsburgh, United States

Discussant

Freydis Vogel, Universität Hamburg, Germany

Exploring Social Contagion in a CSCL Environment with a Social Robot

Nikki Lobczowski, McGill University, Canada; Yuya Asano, University of Pittsburgh, United States; Chloe Dahan, University of Pittsburgh, United States; Teresa Davison, University of Pittsburgh, United States; Timothy Nokes, University of Pittsburgh, United States; Diane Litman, University of Pittsburgh, United States; Adriana Kovashka, University of Pittsburgh, United States; Erin Walker, University of Pittsburgh, United States

Does physiological synchrony vary when we guide collaborative learners where to look at?

Armin Weinberger, Saarland University, Germany; Lena Aoyama Lawrence, Saarland University, Germany

How do students' emotional expressions and regulation dialogue intertwine in collaborative learning?

Sara Ahola, University of Oulu, Finland; Hanna Jarvenoja, University of Oulu, Finland; Tiina Susanna Törmänen, University of Oulu, Finland; Jonna Malmberg, University of Oulu, Finland

The emotional capture of kairos during philosophical group discussions with children

Claire Polo, ECP Laboratory, France; Kristine Lund, CNRS & Ecole Normale Supérieure de Lyon, France

Session S: 7

Time: 12:00-13:30

Location: AUTH_T102

SINGLE PAPER: PHD HOLDERS' CAREERS IN AND BEYOND ACADEMIA**Chair**

Saskia Schreiter, University of Education Heidelberg, Germany

PhD graduates' preparedness for careers beyond academia: The role of support communities

Nata Kereselidze, University of Geneva and HES-SO (University of Applied Sciences and Arts Western Switzerland), Switzerland; Isabelle Skakni, University of Applied Sciences and Arts Western Switzerland, Switzerland

Variation in humanities and social sciences PhD holders' careers beyond academia – the Finnish case

Laura Sundström, University of Helsinki, Finland; Kirsi Pyhältö, University of Helsinki, Finland; Lotta Tikkanen, University of Helsinki, Finland; Henriikka Anttila, University of Helsinki, Finland

Foreign early career academics' well-being profiles at workplaces: A person-oriented approach

Yusuke Sakurai, Hiroshima University, Japan

Session S: 8

Time: 12:00-13:30

Location: UOM_A10

SINGLE PAPER: UNIVERSITY STUDENTS' DROPOUT: REASONS AND PREVENTION**Chair**

Helen Jossberger, University of Regensburg, Germany

How dropout can be prevented by understanding it as a motivational decision process of five phases

Nicola Vivienne Glumann, Pädagogische Hochschule Weingarten, Germany; Robert Grassinger, University of Education Weingarten, Germany; Denise Reisch, University of Education Weingarten, Germany

Educational and occupational pathways of persons who withdraw from teacher education programs

Sebastian Franz, Leibniz Institute for Educational Trajectories (LIfBi), Germany; Steffen Schindler, University of Bamberg, Germany

Reciprocal Relations Between Facets of Study Satisfaction, Procrastination, and Dropout Intentions

Anne Scheunemann, Ruhr-University Bochum, Germany; Theresa Schnettler, Mannheim University, Germany; Lisa Bäumke, University of Tübingen, Germany; Daniel Thies, Ruhr-University Bochum, Germany; Markus Dresel, University of Augsburg, Germany; Stefan Fries, University of Bielefeld, Germany; Detlev Leutner, University of Duisburg-Essen, Germany; Joachim Wirth, Ruhr-University Bochum, Germany; Carola Grunschel, University of Münster, Germany

Study satisfaction and drop-out intention of mathematics pre-service teachers from EVT perspective

Robin Göller, Leuphana University Lüneburg, Germany; Lara Gildehaus, Paderborn University, Germany

The influence of test anxiety on indicators of dropout and study delay

Nikolai Zinke, Deutsches Institut für Erwachsenenbildung Leibniz-Zentrum für Lebenslanges Lernen e.V., Germany; Martin Merkt, Deutsches Institut für Erwachsenenbildung, Germany; Hannes Schröter, German Institute for Adult Education - Leibniz Centre for Lifelong Learning, Germany; Natalia Reich-Stiebert, FernUniversität in Hagen, Germany; Stefan Stürmer, FernUniversität in Hagen, Germany; Sina Lenski, Deutsches Institut für Erwachsenenbildung, Germany

Session S: 9

Time: 12:00-13:30

Location: UOM_R05

SINGLE PAPER: MATHEMATICS AND NUMERACY IN EARLY CHILDHOOD EDUCATION**Chair**

Tessa Consoli, University of Zurich, Institute of Education, Switzerland

Visuospatial working memory explains associations between early math abilities and ANS

David Munez, National Institute of Education / Nanyang Technological University, Singapore; Josetxu Orrantia, University of Salamanca, Spain; Rosario Sánchez, University of Salamanca, Spain; Laura Matilla, University of Salamanca, Spain; Rebecca Bull, Macquarie University, Australia

Developmental relations between manual dexterity and mathematical cognition

Venera Gashaj, Loughborough University, United Kingdom; Dragan Trninić, Swiss Federal Institute of Technology ETH Zurich, Switzerland

Supporting or Restricting Mathematical Communication and Reasoning in Teaching 6-year olds

Jessica Elofsson, University of Gothenburg, Sweden; Anna-Lena Ekdahl, Jönköping University, Sweden

Session S: 10

Time: 12:00-13:30

Location: UOM_A13

SINGLE PAPER: READING: TYPICAL AND ATYPICAL DEVELOPMENT**Chair**

Alicia Ramos, KU Leuven, Belgium

Are Late-Emerging Reading Problems Truly Late- or Gradually Emerging?

Julie Arntzen, The Norwegian Reading Centre (University of Stavanger), Norway; Oddny Judith Solheim, The Norwegian Reading Centre, Norway; Njål Foldnes, The Norwegian Reading Centre, Norway

Developmental dynamics within verbal memory: Are models of typical development valid for dyslexia?

Janin Brandenburg, TU Dortmund University, Germany; Kirsten Schuchardt, University Hildesheim, Germany; Claudia Maehler, University of Hildesheim, Germany

Computer-based development of reading skills to bridge learning gap of disadvantaged students

Renáta Kiss, University of Szeged Institute of Education, MTA-SZTE Digital Learning Technologies Research Group, MTA-SZTE Research Group on the Development of Competencies, Hungary; Katalin Szili, Hungarian University of Agriculture and Life Sciences, Institute of Education, Hungary; Dora Mokri, Szeged Center for Research on Learning and Instruction!, Hungary; Gyöngyvér Molnár, University of Szeged, MTA-SZTE Digital Learning Technologies Research Group, Hungary

Effects of handwriting and typing on learning new words in typically developing and dyslexic readers

Tania Cerni, University of Padova, Italy

Session S: 11

Time: 12:00-13:30

Location: UOM_R09

SINGLE PAPER: SELF-DETERMINATION THEORY: NEED SUPPORT, MOTIVATION AND ENGAGEMENT**Chair**

Michael Schneider, University of Trier, Germany

Need Satisfaction and Frustration Profiles: Stability over Time and Associations with Motivation

Christa Krijgsman, Fontys Hogeschool/Kenniscentrum Youth Education for Society, Netherlands; Tim Mainhard, Leiden University, Netherlands; Lisette Hornstra, Utrecht University, Netherlands; Leen Haerens, Ghent University, Belgium; Jan van Tartwijk, Utrecht University, Netherlands; Lars Borghouts, Fontys University of Applied Sciences, Netherlands; István Tóth-Király, Concordia University, Canada

Does basic psychological need support lead to increased self-concept and int. motivation in PE?

Felix Kruse, University of Teacher Education St. Gallen, Switzerland; Sonja Büchel, University of Teacher Education St. Gallen, Switzerland; Christian Bruehwiler, University of Teacher Education St. Gallen, Switzerland

Latent student profiles based on agentic engagement and teacher autonomy support

Luisa Molinari, University of Parma, Italy; Valentina Grazia, Università degli studi di Parma, Italy; Consuelo Mameli, University of Bologna, Italy

Self-Supportive Strategies to Regulate Autonomy and Motivation

Barbara Flunger, Utrecht University, Netherlands; Lau Lilleholt, Aarhus University, Denmark; Robert Böhm, Universität Wien, Austria; Ingo Zettler, University of Copenhagen, Denmark; Anouk Verdonschot, University Utrecht, Netherlands; Tamara Van Gog, Utrecht University, Netherlands

Session S: 12

Time: 12:00-13:30

Location: AUTH_T202

SINGLE PAPER: FOREIGN AND SECOND LANGUAGE ACQUISITION**Chair**

Verena Jörg, DIPF | Leibniz Institute for Research and Information in Education, Germany

In-Service Primary Teachers' Feedback Perceptions and Essential Learning Moments: Feedback Agency?

Michel Cabot, Western Norway University of Applied Sciences, Norway

Up and Downsides of an Austrian Language Screening Instrument - Findings from Teachers' Perspective

Sepideh Hassani, University of Vienna, Austria; Marie Gitschthaler, University College of Teacher Education Vienna/Krems, Austria; Susanne Schwab, University of Vienna, Austria

Using Qigong mind-body intervention to reduce culturally diverse students' foreign language anxiety

Wai Ming Cheung, The University of Hong Kong, Hong Kong; Wing Yan So, HKJC Centre for Suicide Research and Prevention, Hong Kong; Hector Wing-hong Tsang, The Hong Kong Polytechnic University, Hong Kong

Code-Switching Behavior Indicating Heritage Language Attrition in Dual Language Learning Children

Leila Teresa Schächinger Tenés, Faculty of Psychology, University of Basel, Switzerland, Switzerland; Jessica Carolyn Weiner-Bühler, Faculty of Psychology, University of Basel, Switzerland; Alexander Grob, University of Basel, Switzerland; Robin Klaus Segerer, Faculty of Psychology, University of Basel, Switzerland

Session S: 13

Time: 12:00-13:30

Location: UOM_CR

SINGLE PAPER: EDUCATIONAL ASSESSMENT PRACTICES**Chair**

Jean-Pierre Thibaut, Université de Bourgogne / Lead - CNRS, France

The Norwegian legacy of resisting formal grading: Paradoxes and dilemmas

Lise Vikan Sandvik, Norwegian University of Science and Technology (NTNU), Norway; Dan-Anders Normann, Norwegian University of Science and Technology (NTNU), Norway; Sverre Tveit, University of Oslo, Norway; Henning Fjørtoft, Norwegian University of Science and Technology (NTNU), Norway

Perceptions of assessment: An interview study of being assessed in Swedish adult education colleges

Anders Jönsson, Kristianstad University, Sweden

Towards ethical standards for employing user-generated data in educational assessment

Fazilat Siddiq, University of South-Eastern Norway, Norway; Damian Murchan, University of Dublin, Ireland

Quality of Italian preschool. The why, how and what of preschool evaluation in Italy.

Cristina Stringher, Istituto Nazionale per la Valutazione del Sistema Educativo di Istruzione e di Formazione (INVALSI), Italy

Session S: 14

Time: 12:00-13:30

Location: UOM_A08

SINGLE PAPER: CITIZENSHIP EDUCATION**Chair**

Kim Ouwehand, Erasmus University Rotterdam, Netherlands

Enlarging space for curriculum research within citizenship education: Whole-school approach

Özge Karakuş Özdemirci, Middle East Technical University, Türkiye; Hanife Akar, Middle East Technical University, Türkiye

Views on Holocaust and Citizenship: Israeli and German Civics Teachers

Tim Zosel, University of Duisburg-Essen, Germany

Neutrality in times of war: Russian school in the early days of the invasion of Ukraine

Evgeniia Efimova, Uppsala University, Sweden

Democratic Pedagogy: vision, perceptions and practice - principal's perspectives

Yifat Filo, Tel Aviv University, Israel; Benzi Slakmon, Tel Aviv University, Israel

ANNOTATIONS:

PLEASE NOTE THAT THIS SESSION ROOM HAS CHANGED FROM AUTH_TE1 TO UOM_A08.

Session S: 15

Time: 12:00-13:30

Location: UOM_A04

SINGLE PAPER: UNIVERSITY STUDENTS' ANXIETY, STRESS, AND COPING DURING THE PANDEMIC**Chair**

Nikolaos Fachantidis, University of Macedonia, Greece

University students' stress during the pandemic: Longitudinal evidence from two academic years

Elisabeth Höhne, Leibniz Universität Hannover, Germany; Jannika Haase, Leibniz University Hannover, Germany; Lysann Zander, Leibniz University Hannover, Germany

Psychological distress, anxiety and depression in university students during the COVID-19 pandemic

Maria Koushiou, University of Nicosia, Cyprus; Alexandros Kapatais, University of Nicosia, Cyprus; Nuno Ferreira, University of Nicosia, Cyprus; Marios Adonis, University of Nicosia, Cyprus

Strivings and concerns during the pandemic: University students' perfectionism, stress, and coping

Heta Tuominen, University of Eastern Finland, Finland; Riikka Hirvonen, University of Eastern Finland, Finland; Henriikka Juntunen, University of Helsinki, Finland; Jaana Viljaranta, University of Eastern Finland, Finland; Markku Niemivirta, University of Eastern Finland, Finland

COVID-19 and University Students: Development of the Robust - Pandemic Coping Scale (R-PCS)

Daniela Raccanello, University of Verona, Italy; Giada Vicentini, University of Verona, Italy; Emmanuela Rocca, University of Verona, Italy; Roberto Burro, University of Verona, Italy

Session S: 16

Time: 12:00-13:30

Location: AUTH_T002

SINGLE PAPER: METACOGNITIVE PROCESSES AND SELF-REGULATED LEARNING AND BEHAVIOUR**Chair**

Elisa Vilhunen, University of Helsinki, Finland

Revision and psychometric properties of the Metacognitive Awareness scale MARS1-2fR

Aristea Mavrogianni, University of Crete, Greece; ELENI VASILAKI, University of Crete, Greece; Ioannis Spantidakis, University of Crete, Greece

Metacognitive Awareness Activation and Effortful Problem Solving

Ines Zeithofer, University of Salzburg, Austria; Joerg Zumbach, University of Salzburg, Austria; Judith Schweppe, University of Passau, Germany

Get a Cue! How Metacognitive Prompts Affect the Role of Mental Effort in Generative Activities

Valentin Riemer, Ulm University, Germany; Simona Weber, Ulm University, Germany; Tina Seufert, Ulm University, Germany

The Structure of Procedural Metacognition in Middle Childhood: An Argument for a Unitary Factor

Mariette van Loon, University of Zurich, Switzerland; Ulrich Orth, University of Bern, Switzerland; Claudia Roebbers, University of Bern, Switzerland

Metamotivational scaffolding in a digital learning environment

Jörg Zumbach, University of Salzburg, Austria; Simone Reitstaetter, University of Salzburg, Austria; Bettina Mann, University of Salzburg, Austria; Ines Zeithofer, University of Salzburg, Austria; Hermann Astleitner, University of Salzburg, Austria

Session S: 17

Time: 12:00-13:30

Location: AUTH_TE2

SINGLE PAPER: SOCIAL PARTICIPATION AND INCLUSION OF STUDENTS WITH SPECIAL EDUCATIONAL NEEDS**Chair**

Anne Haarala-Muhonen, University of Helsinki, Finland

Social inclusion and teacher-student-relationship quality at the lower secondary level

Giuliana Pastore, Zurich University of Teacher Education, Switzerland; Reto Luder, Zurich University of Teacher Education, Switzerland; Andre Kunz, Zurich University of Teacher Education, Switzerland; Ariane Paccaud, Pädagogische Hochschule Zürich, Switzerland

Inclusive education of students with emotional and behavioral disorders: A systematic review

Sonja Krämer, Christian-Albrechts-University of Kiel, Germany; Julia Becherer, Christian-Albrechts-University of Kiel, Germany; Friederike Zimmermann, Kiel University, Germany

Social participation of students with behavior problem – a peer group perspective

Marleene Rytioja, University of Eastern Finland, Finland; Kristiina Lappalainen, University of Eastern Finland, Finland; Hannu Savolainen, University of Eastern Finland, Finland

Social participation of children and adolescents with intellectual disabilities in sport clubs

Carmen Zurbriggen, University of Fribourg, Switzerland; Simone Schaub, University of Teacher Education in Special Needs, Switzerland; Mireille Audeoud, Hochschule für Heilpädagogik Zürich, Switzerland; Matthias Lütolf, University of Teacher Education in Special Needs HFH Zurich, Switzerland; Anne Stöcker, University of Luxembourg, Luxembourg; Christina Arn, University of Teacher Education in Special Needs HFH Zurich, Switzerland

Session S: 18

Time: 12:00-13:30

Location: UOM_R01

POSTER PRESENTATION: MINORITY STUDENTS, FOREIGN LANGUAGE ACQUISITION AND MULTICULTURAL EDUCATION

Chair

Anna-Lena Godhe, Jönköping University, Sweden

The benefits of self-efficacy for interest in the short and longer-term.

Luke K. Fryer, The University of Hong Kong, Hong Kong; Nicholas Bovee, Kyushu Sangyo University, Japan; Kaori Nakao, Seinan Gakuin University, Japan; Shuichi Ozono, Kyushu Sangyo University, Japan

A route or a barrier? Teachers' perspective on the role of language to educational inclusion

Michalis Kakos, Leeds Beckett University, United Kingdom

Effectiveness of Instructional Design Focusing on Sentence Construction and Ambiguity

Mika Igarashi, Hosen College of Childhood Education, Japan

Developing contextualised oral language assessments: mapping the local within the local

Joshua McGrane, The University of Melbourne, United Kingdom; Athina Ntalli, University of Oxford, United Kingdom; Usha M N, The Promise Foundation, India; Sanjana Nagendra, The Promise Foundation, India; Megha K, Manipl Academy for Higher Education, India; Siyu Ma, University of Oxford, United Kingdom; Gideon Arulmani, The Promise Foundation, India; Sonali Nag, University of Oxford, United Kingdom

Scaffolding plurilingual students' learning through a functional writing roleplay in grade 1

Kimberly Norrman, Uppsala University EDU, Sweden

Intercultural interpreter-mediated parent-educator talks in childcare centres

Fabienne Bohler, University of Teacher Education St.Gallen, Switzerland; Franziska Vogt, St.Gallen University of Teacher Education, Switzerland

Session S: 19

Time: 12:00-13:30

Location: UOM_R02

POSTER PRESENTATION: COMPREHENSION OF TEXT AND GRAPHICS

Chair

DOMNA KAKANA, Aristotle University of Thessaloniki, Greece

Improving children's visual search for answer to questions in a text through induction tasks

Sabine FEVIN, Centre de Recherches sur la Cognition et l'Apprentissage (CeRCA) - CNRS - Université de Poitiers - Université de Tours, France; Christine Ros, Centre de Recherches sur la Cognition et l'Apprentissage (CeRCA) CNRS - Université de Poitiers - Université de Tours, France; Delphine Oger, Centre de Recherches sur la Cognition et l'Apprentissage (CeRCA) CNRS - Université de Poitiers - Université de Tours, France; Nicolas Vibert, Centre de Recherches sur la Cognition et l'Apprentissage (CeRCA), CNRS, Université de Poitiers, Université de Tours, France

How does structured notes in the form of a graphic organizer influence students' achievement?

Tiphaine Colliot, CeRCA UMR7295 Université de poitiers, France; Karima Mekki, Université de Poitiers, France

Reading accuracy threshold on reading comprehension

NATALIA CALVO BLÁZQUEZ, Universidad de Salamanca, Spain; J. Ricardo García Pérez, Universidad de Salamanca, Spain; Emilio Sánchez, Facultad de Psicología, Spain

The role of sources in single text comprehension.

Javier Rosales, University of Salamanca, Spain; María García Serrano, University of Salamanca, Spain; J. Ricardo García Pérez, Universidad de Salamanca, Spain

Home environment factors and children's and adolescents' critical reading skills:A systematic review

María Psyridou, University of Jyväskylä, Finland; Jenni Ruotsalainen, University of Jyväskylä, Finland; Mari Manu, University of Jyväskylä, Finland; Elizabeth Balch-Crystal, University of Jyväskylä, Finland; Jenni Salminen, University of Jyväskylä, Finland; Leena Paakkari, University of Jyväskylä, Faculty of Sport and Health Sciences, Finland; Minna Torppa, University of Jyväskylä, Finland

Comprehension of Multiple Digital Texts: a longitudinal study in third-grade primary school children

Anouk Bakker, Behavioural Science Institute, Radboud University Nijmegen, Netherlands; Aurora Troncoso-Ruiz, Behavioural Science Institute, Radboud University Nijmegen, Netherlands; Liesbeth Crajé-Tilanus, Behavioural Science Institute, Radboud University Nijmegen, Netherlands; Naomi Bergen, van, Behavioural Science Institute, Radboud University Nijmegen, Netherlands; Marco Ven, van de, Behavioural Science Institute, Radboud University Nijmegen, Netherlands; Jos Keuning, Cito Institute for Educational Measurement, Netherlands; Eliane Segers, Behavioural Science Institute, Radboud University Nijmegen, Netherlands

In the mind of an easy-to-read author – an explorative case study of metalinguistic reasoning

Åsa Wengelin, University of Gothenburg, Sweden

Session S: 20

Time: 12:00-13:30

Location: UOM_GYM

ROUNDTABLE: PROBLEM SOLVING AND CHALLENGE-BASED LEARNING**Chair**

Carmela Aprea, University of Mannheim, Germany

Assessing the skill to solve technical problems in everyday life

Marcus Schrickel, DIPF | Leibniz Institute for Research and Information in Education, Germany; Carolin Hahnel, DIPF | Leibniz Institute for Research and Information in Education, Centre for International Student Assessment (ZIB), Germany; Jennifer Stemmann, Pädagogische Hochschule Freiburg, Germany

Assessing Collaborative Problem-Solving Skills in Higher Education: Evidence from a Case Study

Anna Trikoili, Technical University of Munich, Germany; Despoina Georgiou, Utrecht University, Netherlands; Daniel Pittich, Technische Universität München (TUM), Germany

Challenge-Based Learning in Educational Sciences: Mapping Students and Lecturers' Experiences

Despoina Georgiou, Utrecht University, Netherlands; Dimitra Mousa, Utrecht University, Netherlands

Session S: 21

Time: 12:00-13:30

Location: UOM_R08

WORKSHOP: DEVELOPING QUESTIONING LITERACY WITH THE QUESTION COMPASS**Developing Questioning Literacy with the Question Compass**

H.J.M. Stokhof, HAN University of Applied Sciences, Netherlands; Helma Oolbekkink- Marchand, HAN University Nijmegen, Netherlands; Jeroen Van der Linden, HAN University Nijmegen, Netherlands

ANNOTATIONS:

THIS SESSION WILL TAKE PLACE IN UOM_W INSTEAD OF UOM_R08.

Session S: 22

Time: 12:00-13:30

Location: UOM_A11

ICT DEMONSTRATION: SMART CAT - A SMART CONFIGURABLE SOFTWARE TOOL FOR ASSESSMENT**Smart CAT - A Smart Configurable Software Tool for Assessment**

Konstantinos Georgiadis, Open Universiteit, Department of Online Learning and Instruction., Netherlands

Session T: 1

Time: 14:45-16:15

Location: AUTH_DC2

INVITED SYMPOSIUM: INSTRUCTIONAL PRACTICES FOR ENHANCING LITERACY SKILLS ACROSS EDUCATIONAL CONTEXTS**Chair**

Liana Konstantinidou, Zurich University of Applied Sciences, Switzerland

Discussant

Ioannis Dimakos, University of Patras, Greece

Effect of feedback on the processes and modeling instruction on text quality and literacy behaviors

Elke Van Steendam, KU Leuven, Belgium; Gert Rijlaarsdam, University of Amsterdam, Netherlands; Nina Vandermeulen, Umeå University, Sweden; Marije Lesterhuis, UMC Utrecht, Netherlands; Sven De Maeyer, Antwerp University, Belgium

Scenario-based literacy education: effects of integrated reading and writing tasks on text quality

CURTIS GAUTSCHI, Zurich University of Applied Sciences (ZHAW), Switzerland; Karin Madlener-Charpentier, Zurich University of Applied Sciences (ZHAW), Switzerland; Elsa Liste Lamas, Zurich University of Applied Sciences (ZHAW), Switzerland; Joachim Hoefele, Zurich University of Applied Sciences (ZHAW), Switzerland; Liana Konstantinidou, Zurich University of Applied Sciences, Switzerland

How to improve argumentative synthesis writing using guides and instructional rubrics

Lidia Casado Ledesma, Universidad Autónoma de Madrid, Spain; Isabel Cuevas, Autonoma University of Madrid, Spain; Mar Mateos, Universidad Autónoma de Madrid, Spain; Elena Martín, Universidad Autonoma de Madrid, Spain; Miriam Granado Peinado, Autonomous University of Madrid, Spain; María Luna, Universidad a Distancia de Madrid (UDIMA), Spain; Juan Antonio Nuñez, Universidad Autonoma de Madrid, Spain; Ricardo Olmos, Universidad Autonoma de Madrid, Spain

The Both/And of Research into Synthesis Writing

Nancy Nelson, Louisiana State University, United States

ANNOTATIONS:

SIG 12 INVITED SYMPOSIUM

Session T: 2

Time: 14:45-16:15

Location: AUTH_DC3

INVITED SYMPOSIUM: EDUCATION: SOCIETAL CHANGE, HOPE AND THE STATE OF THE DISCIPLINE**Chair**

Vivienne Baumfield, University of Exeter, United Kingdom

Discussant

Dominic Wyse, Institute of Education, IOE, UCL's Faculty of Education and Society., United Kingdom

Education: Societal Change, Hope and the State of the Discipline

Vivienne Baumfield, University of Exeter, United Kingdom

Exploration of In/Equalities Shown in Statistical Data of Academic Staffing in Higher Education

Joanne O'Keeffe, Queen's University, Belfast, United Kingdom; Dina Zoe Belluigi, Queens University Belfast, United Kingdom; Jason Arday, University of Glasgow, United Kingdom

The State of the Discipline: findings from a survey of education researchers

Jess Pilgrim-Brown, University of Warwick/University of Bristol, United Kingdom; Tom Perry, University of Warwick, United Kingdom; Rebecca Morris, University of Warwick, United Kingdom; Emma Smith, University of Warwick, United Kingdom

ANNOTATIONS:

INVITED SYMPOSIUM OF THE BRITISH EDUCATION RESEARCH ASSOCIATION (BERA)

Session T: 3

Time: 14:45-16:15

Location: UOM_CH

SYMPOSIUM: PROMOTING SELF-REGULATED LEARNING: THE EFFECT OF TEACHERS' COMPETENCES AND TEACHING PRACTICES**Chair**

Johannes Jud, University of Zurich, Switzerland

Discussant

Franziska Perels, Saarland University, Germany

Using video-based modelling examples to foster pre-service teachers' SRL competences

Antonia Fischer, Institute for School Development Research, TU Dortmund University, Germany; Charlotte Dignath, TU Dortmund University, Germany

The impact of an in-service teacher professionalization on teachers' SRL competences

Lies Backers, Ghent University, Belgium; Hilde Van Keer, Ghent University, Belgium

Teachers' direct and indirect promotion of self-regulated learning in secondary school

Joachim Wirth, Ruhr-University Bochum, Germany; Xenia-Lea Weber, Ruhr-University Bochum, Germany; Jens Fleischer, Ruhr-University Bochum, Germany; Ferdinand Stebner, University of Osnabrück, Germany; Corinna Schuster, Ruhr University Bochum, Germany; Detlev Leutner, University of Duisburg-Essen, Germany

Teachers' motivation for self-regulated learning: Relations to students' motivation

Johannes Jud, University of Zurich, Switzerland; Yves Karlen, University of Zurich, Switzerland; Carmen Nadja Hirt, University of Applied Sciences and Arts Northwestern Switzerland (FHNW), Switzerland

Session T: 4

Time: 14:45-16:15

Location: AUTH_DC1

SYMPOSIUM: HOW TO OPTIMIZE METACOGNITIVE MONITORING AND JUDGMENT ACCURACY**Chairs**

Rebecca Krebs, Ruhr-University Bochum, Germany; Linda Froese, Ruhr University Bochum, Germany

Organisers

Rebecca Krebs, Ruhr-University Bochum, Germany; Linda Froese, Ruhr University Bochum, Germany

Discussant

Lucia Mason, University of Padova, Italy

Can students monitor motivational and emotional strategies through self-talk? An intervention study.

Alazne Fernández Ortube, University of Deusto, Spain; Ernesto Panadero, Universidad Deusto, Spain; Charlotte Dignath, German Institute for International Educational Research (DIPF), Germany; Lucía Barrenetxea-Mínguez, University of Deusto, Spain; Jesús Marauri, Universidad de Deusto, Spain

Self-assessment of diagrams to increase monitoring accuracy in reading comprehension

Héctor J. Pijeira-Díaz, Maastricht University, Netherlands; Janneke van de Pol, Utrecht University, Netherlands; Faisal Rehman Channa, University of Jyväskylä, Finland; Anique de Bruin, Maastricht University, Netherlands

How to enhance learners' accuracy in evaluating self-generated examples?

Linda Froese, Ruhr University Bochum, Germany; Julian Roelle, Ruhr University Bochum, Germany

How to foster self-assessment accuracy and regulation through rubrics

Rebecca Krebs, Ruhr-University Bochum, Germany; Julia Waldeyer, Ruhr-University Bochum, Germany; Björn Rothstein, Ruhr University Bochum, Germany; Julian Roelle, Ruhr University Bochum, Germany

Session T: 5

Time: 14:45-16:15

Location: UOM_A03

SYMPOSIUM: STEREOTYPES AND STEREOTYPE THREAT IN THE CLASSROOM: EFFECTS AND INTERVENTIONS**Chairs**

Cristina Stringher, Istituto Nazionale per la Valutazione del Sistema Educativo di Istruzione e di Formazione (INVALSI), Italy; Justine Stang-Rabrig, TU Dortmund University, Germany; Nele McElvany, TU Dortmund University, Germany

Organiser

Justine Stang-Rabrig, TU Dortmund University, Germany

Discussant

Johannes Keller, Ulm University Institute of Psychology and Education, Germany

How stereotype awareness and stereotype belief impact test anxiety and self-efficacy in math

Nadia Leroy, Université Grenoble Alpes, France; Sylvain Max, Burgundy School of Business, France; Pascal Pansu, Université Grenoble Alpes, France

Stereotype Threat Effects on Vocabulary Learning and Stress Response

Justine Stang-Rabrig, TU Dortmund University, Germany; Sabrina König, TU Dortmund University, Germany; Oliver Wolf, Ruhr University Bochum, Bochum, Germany; Nele McElvany, TU Dortmund University, Germany

Social Identity Threat is Related to Ethnic Minority Adolescents' Social Approach Motivation

Laura Froehlich, FernUniversität in Hagen, Germany; Nathalie Bick, FernUniversität in Hagen, Germany; Jana Nikitin, University of Vienna, Austria; Sarah E. Martiny, UiT The Arctic University of Norway, Norway

How does stereotype threat work and how to buffer its effects on minority achievement?

Karen PHALET, KU LEUVEN, Belgium; Gülseli Baysu, Queen's University Belfast, United Kingdom

Session T: 6

Time: 14:45-16:15

Location: UOM_A02

SYMPOSIUM: FAMILY-BASED INTERVENTIONS: INCREASING DEVELOPMENTAL AND EDUCATIONAL CHANCES OF CHILDREN AT-RISK?**Chair**

Isabelle Kalkusch, University of Teacher Education of Special Needs, Switzerland

Organiser

Isabelle Kalkusch, University of Teacher Education of Special Needs, Switzerland

Discussant

Minna Törmänen, University of Teacher Education in Special Needs Zurich, Switzerland; University of Helsinki, Finland, Switzerland

Effects of two staffing models in the home visiting program Pro Kind at age 7

Marie Lisanne Schepan, Leibniz-Institute for Prevention Research and Epidemiology - BIPS, Germany; Malte Sandner, Technical University Nuernberg, Germany; Sören Kliem, Department of Social Work, University of Applied Sciences Jena, Germany; Tilman Brand, Leibniz Institute for Prevention Research and Epidemiology – BIPS, Germany

Early Childhood Family-Based Intervention: Effects on School Relevant Outcomes in Primary School?

Isabelle Kalkusch, University of Teacher Education of Special Needs, Switzerland; Alex Neuhauser, University of Applied Sciences of Special Needs Education, Switzerland; Patsawee Rodcharoen, University of Teacher Education in Special Needs Zurich, Switzerland, Switzerland; Simone Schaub, University of Teacher Education in Special Needs, Switzerland; Minna Törmänen, University of Teacher Education in Special Needs Zurich, Switzerland; University of Helsinki, Finland, Switzerland; Erich Ramseier, Bern University of Teacher Education (i. R.), Switzerland; Andrea Lanfranchi, University of Applied Sciences of Special Needs Education, Switzerland

Reducing behavioral problems: A family and school-based intervention

Markus Neuenschwander, University of Applied Sciences and Arts Northwestern Switzerland, Switzerland; Ilona Rösti, University of Applied Sciences and Arts Northwestern Switzerland FHNW, Switzerland; Vanessa Prieth, University of Applied Sciences and Arts Northwestern Switzerland FHNW, Switzerland; Alafia Zavary, University of Applied Sciences and Arts Northwestern Switzerland FHNW, Switzerland

Parental involvement interventions for children with special educational needs: A systematic review

Hannah Hamid, UCL- Institute of Education, United Kingdom; Zachary Walker, UCL- Institute of Education, United Kingdom; Jo Van Herwegen, UCL Institute of Education, United Kingdom

Session T: 7

Time: 14:45-16:15

Location: AUTH_T102

SINGLE PAPER: VIDEO-BASED LEARNING**Chair**

Charalambos Charalambous, University of Cyprus, Cyprus

Cognitive and Attentive Measures of Intra-individual Variability in Video-based Learning

Kshitij Sharma, Norwegian University of Science and Technology (NTNU), Norway

Social Cues in Educational Videos – The Importance of Moderating Variables

Maik Beege, University of Education Freiburg, Germany

Do learners' benefit when taking notes from instructional videos and if how?

Anke Wischgoll, TU Dortmund University, Germany; Monika Post, TU Dortmund University, Germany

Prompts and Engagement during an Online Video Lecture: An Experimental Field Study

Markus H. Hefter, Bielefeld University, Germany; Veit Kubik, University of Würzburg, Germany; Kirsten Berthold, University of Bielefeld, Germany

Session T: 8

Time: 14:45-16:15

Location: UOM_A06

SINGLE PAPER: CRITICAL THINKING, EPISTEMIC BELIEFS AND KNOWLEDGE CONSTRUCTION**Chair**

Vasilisa Christidou, Aristotle University of Thessaloniki, Greece

The relative influence of epistemic aims and epistemic perspectives on reasoning processes
Michael Weinstock, Ben-Gurion University of the Negev, Israel; Netta Le Guennec, Ben Gurion University of Negev, Israel

Resolving Disagreements Between Experts through Identifying Questionable Research Practices
Clark Chinn, Rutgers University, United States; Toshio Mochizuki, Senshu University, Japan; Hiroki Oura, Tokyo University of Science, Japan; Etsuji Yamaguchi, Kobe University, Japan

Epistemic Understanding as Basis for Evaluating Change in Scientific Conclusions Regarding COVID-19

Michael Weinstock, Ben-Gurion University of the Negev, Israel; Sarit Barzilai, University of Haifa, Israel; Eva Thomm, University of Erfurt, Germany; Nadav Davidovitch, Ben-Gurion University of the Negev, Israel

Factorial validity revised: The structure of epistemic beliefs and perspectives across instruments
Martin Greisel, University of Augsburg, Germany; Ingo Kollar, University of Augsburg, Germany

Session T: 9

Time: 14:45-16:15

Location: UOM_R09

SINGLE PAPER: ENGLISH AS A FOREIGN LANGUAGE**Chair**

Jeroen Lavrijsen, KU Leuven, Belgium

Relationships between motivation and anxiety in adult EFL learners
Merih Welay, University of Szeged, Hungary; Marianne Nikolov, University of Pécs, Hungary

Primary school EFL teachers implementing an ambitious 21st century skills curriculum
Tony Burner, University of South-Eastern Norway, Norway

Using educational technology in adult ESOL provision: a case study
Pirjo Mottus, University of Tartu, Estonia

Session T: 10

Time: 14:45-16:15

Location: UOM_A05

SINGLE PAPER: GENDER ISSUES IN HIGHER EDUCATION AND LIFELONG LEARNING**Chair**

Tom Rosman, Leibniz Institute for Psychology (ZPID), Germany

Entrepreneurship Education in Higher Education: Preliminary insights from the GUESSS survey
Athanasia Loukidou, University of Macedonia, Greece; Stavroula Laspita, University of Western Macedonia, Greece; KATERINA SARRI, UNIVERSITY OF MACEDONIA, Greece

The work of language. Explorations of institutional responses to diversity in Swedish universities.
Asia Della Rosa, Jönköping University, Sweden; Sangeeta Bagga-Gupta, Jönköping University, Sweden

Sexism in Higher Education: An experimental study to assess gender stereotypes using vignettes
Ana María Espinoza Catalán, Universidad de O'Higgins, Chile; Natalia Albornoz, Universidad de O'Higgins, Chile

Lifelong learning and late working life: Risks and Inequalities across four European countries
Nehle Penning, TU Dortmund University, Germany; Rachel Crossdale, The University of Sheffield, United Kingdom; Monika Reichert, TU Dortmund University, Germany

Session T: 11

Time: 14:45-16:15

Location: UOM_A04

SINGLE PAPER: COMPUTER-SUPPORTED SELF- AND CO-REGULATED LEARNING**Chair**

Mathias Mejeu, University of Bern, Switzerland

Learners engagement in shared regulation between the learner and the technology

Rianne Kooi, Radboud University Nijmegen, Netherlands; Carolien Knoop-van Campen, Radboud University, Netherlands; Eliane Segers, Radboud University, Netherlands; Inge Molenaar, Radboud University, Netherlands

Fostering Self-Regulated Learning through a Digital Tool - A Mixed Methods Study

Mathias Mejeu, University of Bern, Switzerland; Livia Sarbach, University of Bern, Switzerland; Tina Hascher, University of Bern, Institute of Educational Science, Switzerland

Supporting regulated learning in collaboration in higher education

Suijing Yang, The University of Queensland, Australia; Jason Lodge, The University of Queensland, Australia; Cam Brooks, The University of Queensland, Australia; Jingyang Ai, University of the West of Scotland, United Kingdom

Understanding social emotions and their regulation in online CSCL

Sabrine Hassane, Open University of the Netherlands, Netherlands; Jorrick Beckers, Open University of the Netherlands, Netherlands; Karel Kreijns, Open University of the Netherlands, Netherlands

Session T: 12

Time: 14:45-16:15

Location: UOM_A08

SINGLE PAPER: TEACHERS' COLLABORATIVE PRACTICES**Chair**

Heli Aomets, Tallinn University, Estonia

Teachers' assessments of their collaboration practices

Katrin Saks, University of Tartu, Estonia; Pihel Hunt, University of Tartu, Estonia; Äli Leijen, University of Tartu, Estonia; Liina Lepp, University of Tartu, Estonia

Evaluating the impact of a pedagogical training program offered to awarded university teachers

Radu Balan, West University of Timisoara, Romania; Purta Nadia, West University of Timisoara, Romania; Veilbor Mladenovici, West University of Timisoara, Romania; Marian Ilie, West University of Timisoara, Romania

Exploring faculty members' diverse perspectives on interdisciplinary higher education

Xiaoqi Feng, Aalto University, Finland

Peer Assisted Study Scheme (PASS) and its potential benefits for participants and facilitators

William Carey, Lund University / Loughborough University, Sweden; Joakim Malm, Lund University, Sweden; Lise-Lotte Mörner, Lund University, Sweden

ANNOTATIONS:

PLEASE NOTE THAT THIS SESSION ROOM HAS CHANGED FROM AUTH_TE1 TO UOM_A08.

Session T: 13

Time: 14:45-16:15

Location: UOM_CR

SINGLE PAPER: FRIENDSHIPS, SOCIAL INTERACTION AND SOCIAL (IN)EXCLUSION**Chair**

Daniela Nussbaumer, University of Applied Sciences of Special Needs Education, Switzerland

Friendships in inclusive classrooms – network analysis from teachers' and students' perspectives

Katharina-Theresa Lindner, University of Vienna, Austria

Students' friendships - The role of gender & self-perceived social inclusion in inclusive classrooms

Ariana Garrote, University of Applied Sciences and Arts Northwestern Switzerland, School of Education, Switzerland; Carmen Zurbruggen, University of Fribourg, Switzerland; Susanne Schwab, University of Vienna, Austria

Improving students' attitudes towards peers with special needs: Results from an intervention study

Marwin Felix Loeper, Paderborn University, Germany; Gamze Görel, Paderborn University, Germany; Frank Hellmich, Paderborn University, Germany

University students' behavioural intentions towards social exclusion

Mareike Brehmer, University of Agder, Norway; Jennifer Meyer, Leibniz-Institute for Science and Mathematics Education, Germany

Session T: 14

Time: 14:45-16:15

Location: UOM_A07

SINGLE PAPER: SIMULATION-BASED LEARNING**Chair**

Chiel van der Veen, Vrije Universiteit Amsterdam, Netherlands

Authentic tasks and Scaffolding in Higher Education: a Meta-Analysis on Effects of Simulations

Olga Chernikova, Ludwig Maximilian University, Germany; Doris Holzberger, Technical University of Munich (TUM) & ZIB (Centre for International Student Assessment), Germany; Nicole Heitzmann, Ludwig-Maximilians-Universität (LMU), Germany; Matthias Stadler, Ludwig-Maximilians-Universität (LMU), Germany; Tina Seidel, Technische Universität München, Germany; Frank Fischer, Ludwig-Maximilians-Universität (LMU), Germany

Can simulation-based training shape professional identity in addition to competencies?

Pauliina Rikala, University of Jyväskylä, Finland; Minna Ruoronen, University of Jyväskylä, Finland; Kaisa Silvennoinen, University of Jyväskylä, Finland; Aaron Peltoniemi, University of Jyväskylä, Finland; Raija Hämäläinen, University of Jyväskylä, Finland

Social embedding in virtual learning simulations and its relation to the quality of task solution

Anke Braunstein, University of Mannheim, Germany; Viola Deutscher, University of Mannheim, Germany

Task perception, task performance, and learning outcomes in simulation-based inquiry learning

Tomi Jaakkola, Tampere University, Finland; Koen Veermans, University of Turku, Department of Teacher Education, Finland

Session T: 15

Time: 14:45-16:15

Location: AUTH_T202

SINGLE PAPER: DASHBOARDS, LEARNING ANALYTICS AND EDUCATIONAL TECHNOLOGIES**Chair**

Jean-Michel Boucheix, University of Dijon, LEAD-CNRS, France

Students Value Alignments and Tensions with Learning Analytics

Egle Gedrimiene, University of Oulu, Finland; Hanni Muukkonen, University of Oulu, Finland

The use and misuse of learning analytics dashboards: the case of UK primary schools teachers

Manolis Mavrikis, UCL Knowledge Lab, United Kingdom; Eirini Geraniou, University College London, Institute of Education, United Kingdom

Automated Short Answer Grading using BERT on German datasets

Sukanya Nath, Swiss Distance University of Applied Sciences (FFHS), Switzerland; Behnam Parsaeifard, Swiss Distance University of Applied Sciences (FFHS), Switzerland; Egon Werlen, Swiss Distance University of Applied Sciences (FFHS), Switzerland

Primary school teachers' skills to perceive, interpret and make decisions based on dashboards

Rani Van Schoors, KU LEUVEN, Belgium; Stefanie Vanbecelaere, KU Leuven, Belgium; Line Deprez, KU LEUVEN, Belgium; Antje Demulder, KU LEUVEN, Belgium; Fien Depaepe, KU Leuven, Belgium

Session T: 16

Time: 14:45-16:15

Location: UOM_A11

SINGLE PAPER: DEVELOPING WRITING SKILLS AND COMPETENCIES**Chair**

BENGU CILALI, Bilkent University, Turkiye

Developing plurilingual writing competence in collaborative and cooperative settings

Olivia Rütli-Joy, St.Gallen University of Teacher Education, Switzerland; Valentin Unger, St.Gallen University of Teacher Education, Switzerland

Developing revision skills: Studying real-time writing processes to inform instruction practices

Victoria Johansson, Kristianstad University, Sweden; Åsa Wengelin, University of Gothenburg, Sweden

A study on the impact of explicit instruction and collaborative writing on argumentative writing

Yana Landrieu, Ghent University, Belgium; Fien De Smedt, Ghent University, Belgium; Hilde Van Keer, Ghent University, Belgium; Bram De Wever, Ghent University, Belgium

Approaches to thesis writing and writer profiles

Laura Mendoza, University of Helsinki, Finland; Sari Lindblom, University of Helsinki, Finland; Tuula Lehtonen, University of Helsinki, Finland; Heidi Hyytinen, University of Helsinki, Finland

Session T: 17

Time: 14:45-16:15

Location: AUTH_TE2

SINGLE PAPER: DIGITAL LITERACY AND LEARNING IN PRIMARY AND SECONDARY EDUCATION**Chair**

Kimberly Norrman, Uppsala University EDU, Sweden

Digital natives = digital experts? Designing a novel instrument to measure digital competence

Sümevra Tural, Leibniz Institute for Educational Trajectories, Germany; Mariann Schwaß, Leibniz Institute for Educational Trajectories, Germany

Fostering text integration in primary education: What type of instruction should teachers provide?

Raquel Cerdan, University of Valencia, Spain; Fátima Rahim, University of Valencia / Interdisciplinary Research Structure for Reading Research (ERI Lectura), Spain; Ignacio Máñez, University of Valencia / Interdisciplinary Research Structure for Reading Research (ERI Lectura), Spain; Jason L.G. Braasch, Georgia State University, United States

Digital multimodal message quality and features that affect it: an exploratory study

Ilias Karasavvidis, University of Thessaly, Greece

Student groups evaluating their group work behaviour and learning of critical online reading

Miika Marttunen, University of Jyväskylä, Finland; Minna Lakkala, University of Helsinki, Finland; Timo Salminen, University of Jyväskylä, Finland; Liisa Ilomäki, University of Helsinki, Finland

Session T: 18

Time: 14:45-16:15

Location: UOM_A13

SINGLE PAPER: EPISTEMIC BELIEFS AND EMOTIONS**Chair**

Kirsti Lonka, University of Helsinki, Finland

Epistemic development during the three first undergraduate years in five academic professions

Kirsti Lonka, University of Helsinki, Finland; Elina E. Ketonen, University of Helsinki, Finland

The Retest-Stability of Epistemic Beliefs about the Certainty of Knowledge in Science

Peter Edelsbrunner, ETH Zurich, Switzerland

Modeling learners' epistemic emotions and engagement in a university live-streaming classroom

Tonny Menglun Kuo, Center for Teaching and Learning Development, National Tsing Hua University, Taiwan, Taiwan; Tzung-Jin Lin, School of Learning Informatics, Program of Learning Sciences, National Taiwan Normal University, Taiwan

Feeling confident about your wrong answer: The role of feedback in the arousal of epistemic emotions

Katerina Nerantzaki, Aristotle University of Thessaloniki, Greece; Paraskevi Stergiadou, Aristotle University of Thessaloniki, Greece; Panayiota Metallidou, Aristotle University of Thessaloniki, Greece

Session T: 19

Time: 14:45-16:15

Location: UOM_R05

SINGLE PAPER: ASSESSMENT AND TOOL DEVELOPMENT IN EARLY CHILDHOOD EDUCATION**Chair**

Avi Kaplan, Temple University, United States

The East Asia-Pacific Early Child Development Scales: A Longitudinal Validation Study in China

Stephanie Wing Yan Chan, The University of Hong Kong, Hong Kong; Yufen Su, The University of Hong Kong, Hong Kong; Nirmala Rao, The University of Hong Kong, Hong Kong

Cross-cultural measurement invariance of the early childhood development assessment tool FREDI 0-3

Nadine Doennecke, University of Hildesheim, Institute of Educational Science, Germany; Janin Brandenburg, TU Dortmund University, Germany; Claudia Maehler, University of Hildesheim, Germany

Test-fairness assessing executive functions in preschoolers from Germany and Hongkong

Claudia Maehler, University of Hildesheim, Germany; Katharina Schirmbeck, University of Hildesheim, Germany; Stephanie Wing Yan Chan, The University of Hong Kong, Hong Kong; Nirmala Rao, The University of Hong Kong, Hong Kong

Digital Competence in Kindergarten: Adopting the DigCompEduSAT for Kindergarten Teachers

Attila Rausch, ELTE Eötvös Loránd University, Budapest, Hungary

Session T: 20

Time: 14:45-16:15

Location: UOM_R08

SINGLE PAPER: INFORMAL LIFELONG LEARNING**Chair**

Kati Vasalampi, University of Jyväskylä, Finland

Practices of technology-enhanced informal workplace learning in knowledge work

Anne Karhapää, University of Jyväskylä, Finland; Raija Hämäläinen, University of Jyväskylä, Finland; Johanna Pöysä-Tarhonen, University of Jyväskylä, Finland

Pop Bands' Practice: Goal Setting, Monitoring and Feedback Seeking

Simon Schmidt, Universität Regensburg, Germany; Helen Jossberger, University of Regensburg, Germany; Hans Gruber, University of Regensburg, Germany

The Relationships between Job Insecurity and Informal Learning in Finance – A survey study

Patrick Beer, University of Regensburg, Germany; Sandra Bauhofer, University of Regensburg, Germany; Regina Mulder, University of Regensburg, Germany

Factors related to Teachers' innovative behavior: a multilevel meta-analysis

Stefan Robbers, Open University Netherlands, Netherlands; Arnoud Evers, Open Universiteit Nederland, Netherlands; Marjan Vermeulen, Heerlen Open Universiteit, Netherlands

Session T: 21

Time: 14:45-16:15

Location: AUTH_T002

SINGLE PAPER: CONCEPTUAL CHANGE AND TEACHING**Chair**

Jan-Mikael Rybicki, Aalto University, Finland

Intent and relationality in middle leading practices of facilitation, mentoring and coaching

Christine Edwards-Groves, Griffith University, Australia; Catherine Attard, University of Western Sydney, Australia; Sharon Tindall-Ford, University of Wollongong, Australia; Peter Grootenboer, Griffith University, Australia

Implementing conceptual change principles for mathematics instruction: the case of fraction division

Ioanna Koptsi, University of Ioannina, Greece; Greece; Konstantinos Christou, Aristotle University of Thessaloniki, Greece; Xenia Vamvakoussi, University of Ioannina, Greece

An intervention with erroneous examples to address misconceptions on equations and inequalities

Eleni Karagiannidou, Aristotle University of Thessaloniki, Greece; Courtney Pollack, Harvard University, United States; Konstantinos Christou, Aristotle University of Thessaloniki, Greece

Session T: 22

Time: 14:45-16:15

Location: UOM_A09

ICT DEMONSTRATION: EFFORT TRACKING: USING TEACHER AND STUDENT RATINGS OF STUDENTS' EFFORT IN GOAL-SETTING CONVERSATIONS**Effort Tracking: Using Teacher and Student Ratings of Students' Effort in Goal-Setting Conversations**

Robin Nagy, UNSW, Australia

Session T: 23

Time: 14:45-16:15

Location: UOM_A10

ICT DEMONSTRATION: MAKING SPAGEO CITY, THE INTERACTIVE DESIGN OF A VIRTUAL ENVIRONMENT FOR TRAINING SPATIAL SKILLS**Making SPAGEO City, the interactive design of a virtual environment for training spatial skills**

Fatou-Maty Diouf, University of Geneva, Switzerland; Sabrina Matri, University of Geneva, Switzerland; Jean-Luc Dorier, University of Geneva, Switzerland

Session U: 1

Time: 16:30-18:00

Location: UOM_CH

INVITED SYMPOSIUM: MORE THAN JUST NOISE? NEW INSIGHTS ON HETEROGENEITY IN STUDENTS' PERCEPTIONS OF INSTRUCTION**Chair**

Lisa Bardach, University of Tübingen, Germany

Organisers

Lisa Bardach, University of Tübingen, Germany; Sebastian Röhl, University of Tübingen, Germany

Discussant

Jonathan Schweig, RAND Corporation, United States

Heterogeneity in students' perception of instruction is a marker of non-adaptive teaching
Sebastian Röhl, University of Tübingen, Germany; Lisa Bardach, University of Tübingen, Germany

Differentiated instruction from students' perspective in mathematics lessons

Emilie Prast, Leiden University, Netherlands; Marieke van Geel, University of Twente, Netherlands; Trynke Keuning, Hogeschool KPZ, Netherlands; Hans Luyten, University of Twente, Netherlands

Heterogeneity in instructional quality perceptions as indicator of teachers' diagnostic competence?

Marko Lüftenegger, University of Vienna, Austria; Claudia Neuendorf, Hector Institute for Education Research and Psychology, Tübingen University, Germany; Joy Muth, University of Vienna, Austria; Kou Murayama, University of Tübingen, Germany

Teacher involvement and help seeking: An intraindividual approach to within-group heterogeneity

Kyle Davison, University of Oxford, United Kingdom; Lars-Erik Malmberg, University of Oxford, United Kingdom; Kathy Sylva, University of Oxford, United Kingdom

ANNOTATIONS:
EFG INVITED SYMPOSIUM

Session U: 2

Time: 16:30-18:00

Location: AUTH_DC1

SYMPOSIUM: MULTIMODAL APPROACHES WITH MEASURES OF PHYSIOLOGICAL AROUSAL IN EDUCATION**Chair**

Inge Molenaar, Radboud University Nijmegen, Netherlands

Organiser

Anne Horvers, Radboud University Nijmegen, Netherlands

Discussant

Lars-Erik Malmberg, University of Oxford, United Kingdom

Analyzing Multimodal Data to Understand Trainees' Regulation Strategies in Simulation Scenarios

Matthew Moreno, McGill University, Canada; Lucia Patino, McGill University, Canada; Keerat Grewal, McGill University, Canada; Sayed Azher, McGill University, Canada; Jason Harley, McGill University, Canada

How students' socio-emotional interaction profiles emerge in collaborative learning

Tiina Susanna Törmänen, University of Oulu, Finland; Mohammed Saqr, University of Eastern Finland, Finland; Hanna Jarvenoja, University of Oulu, Finland; Jonna Malmberg, University of Oulu, Finland; Sanna Järvelä, University of Oulu, Finland

Physiological Synchrony in Interpersonal Agency: A Case Study on Collaborative Problem Solving

Reito Visajaani Salonen, Helsinki Institute for Social Sciences and Humanities, University of Helsinki, Finland; Eeva Haataja, University of Helsinki, Finland; Esther Chan, University of Melbourne, Australia; Chase Sherwell, University of Queensland, Australia; Ross Cunningham, University of Queensland, Australia

Multimodal data streams to explore emotional responses to immediate feedback in young learners

Anne Horvers, Radboud University Nijmegen, Netherlands; Ard Lazonder, Radboud University, Netherlands; Inge Molenaar, Radboud University Nijmegen, Netherlands; Tibor Bosse, Radboud University Nijmegen, Behavioural Science Institute, Netherlands

Session U: 3

Time: 16:30-18:00

Location: UOM_CR

SYMPOSIUM: EDUCATING FOR DEMOCRACY. TEACHING AND LEARNING DOMAIN-SPECIFIC REASONING TO DISCUSS SOCIAL ISSUES**Chair**

Carla Van Boxtel, University of Amsterdam, Netherlands

Organiser

Geerte Savenije, University of Amsterdam, Netherlands

Discussant

Gerhard Stoel, Radboud University, Nijmegen, Netherlands

Design principles and educative materials that can promote students' social scientific reasoning
Thomas Klijnstra, University of Amsterdam, Netherlands

Teaching strategies for value-loaded critical reasoning in philosophical dialogues

Geerte Savenije, University of Amsterdam, Netherlands; Floor Rombout, Utrecht University, Netherlands

Advancing students' reasoning about democracy: A project on social and political trust

Maria Jansson, Örebro University, Sweden; Johan Sandahl, Stockholm University, Sweden; Patrik Johansson, Department of Teaching and Learning, Stockholm university, Sweden

The relationship between students' reasoning about historical and social issues in inquiry tasks

Fien Depaepe, KU Leuven, Belgium; Karel Van Nieuwenhuysse, KU Leuven, Belgium; Marjolein Wilke, KU Leuven, Belgium

Session U: 4

Time: 16:30-18:00

Location: UOM_A02

SYMPOSIUM: INTERNAL AND EXTERNAL INFLUENCES THAT PROMOTE INTEREST DEVELOPMENT DURING HIGHER EDUCATION**Chairs**

Paul O'Keefe, Yale-NUS College, Singapore; Kathleen M Quinlan, University of Kent, United Kingdom

Discussant

K. Ann Renninger, Swarthmore College, United States

Boosting STEM Interest Among Liberal Arts Undergraduates with a Brief Growth-Mindset Intervention

Paul O'Keefe, Yale-NUS College, Singapore; E. J. Horberg, Yale-NUS College, Singapore; Carol Dweck, Stanford University, United States; Gregory Walton, Stanford University, United States

Interventions to Promote Interest in Introductory Chemistry and Longer-Term Persistence in STEM

Judith Harackiewicz, University of Wisconsin-Madison, United States; Michael Asher, University of Wisconsin-Madison, United States; Cameron Hecht, The University of Texas at Austin, United States; Patrick Beymer, University of Wisconsin - Madison, United States

Promoting Student Interest Via Culturally Sensitive Curricula in Higher and Professional Education

Kathleen M Quinlan, University of Kent, United Kingdom; Dave Thomas, University of Kent, United Kingdom; Annette Hayton, University of Bath, United Kingdom; Jo Astley, University of Derby, United Kingdom; Leda Blackwood, University of Bath, United Kingdom; Fatmata Daramy, The University of Law, United Kingdom; Morag Duffin, The University of Law, United Kingdom; Muhammad Arslan Haider, University of Kent, United Kingdom; Deborah Husbands, University of Westminster, United Kingdom; Helen Kay, Sheffield Hallam University, United Kingdom; Mary Mosoeunyane, Buckinghamshire New University, United Kingdom; Ian Turner, University of Derby, United Kingdom; Clare Walsh, Sheffield Hallam University, United Kingdom; Dan West, University of Derby, United Kingdom

The Role of Implicit Theories about Interest when Regulating Motivation

Carol Sansone, University of Utah, United States; Yun Tang, University of Utah, United States; Jasmine Norman, University of North Carolina, Wilmington, United States; Dustin Thoman, San Diego State University, United States

Session U: 5

Time: 16:30-18:00

Location: UOM_R08

SINGLE PAPER: PEER INTERACTION AND FEEDBACK**Chair**

Erdem Onan, Maastricht University, Netherlands

Effects of a comparative assessment method on how students use peer feedback for revision

Janneke Stuulen, University Utrecht, Netherlands; Renske Bouwer, Utrecht University, Netherlands; Huub van den Bergh, Utrecht University, Netherlands

Joint knowledge construction during feedback interaction in Reciprocal Peer Observation

Ester Miquel, Universitat Autònoma de Barcelona, Spain; Marta Flores, UAB Universitat Autònoma de Barcelona, Spain; Andy Morodo, Universitat Autònoma de Barcelona, Spain; David Duran Gisbert, Universitat Autònoma de Barcelona, Spain

Providing Agency to Students in Peer Feedback Settings: The Free-Selection Approach

Pantelis Papadopoulos, University of Twente, Netherlands; Alieke van Dijk, University of Twente, Netherlands; Natasha Dmshinskaia, University of Twente, Netherlands; Hannie Gijlers, University of Twente, Netherlands

Teachers' peer feedback in basic education

Dolors Forteza Forteza, Universitat de les Illes Balears, Spain; Francisca Moreno Tallón, Universitat de les Illes Balears, Spain; Joana Llabrés Ferrer, Universitat de les Illes Balears, Spain; Begoña De la Iglesia Mayol, Universitat de les Illes Balears, Spain

Session U: 6

Time: 16:30-18:00

Location: UOM_A08

SINGLE PAPER: INTEREST AND BOREDOM IN UNIVERSITY STUDENTS**Chair**

Alberto Nagle Cajés, Independent Consultant, Uruguay

Effect of Interest Fit on Academic Success in Higher Education: Meta-Analysis and Systematic Review

Nicky de Vries, Vrije Universiteit Amsterdam, Netherlands; Martijn Meeter, Vrije Universiteit Amsterdam, Netherlands; Mariette Huizinga, Vrije Universiteit Amsterdam, Netherlands

Does the situation matter for learning? Effect of mind wandering and interest in multimedia learning

Perche Louise, Paris Nanterre University, France; Yennek Nora, Paris Nanterre University, France; Leger Laure, Paris Nanterre University, France

Watching the paint dry in the classroom. Evolution and predictors of boredom in bachelor students

Velibor Mladenovici, West University of Timisoara, Romania; Laurentiu P. Maricutoiu, West University of Timisoara, Romania; Daniela - Georgiana Valache (Voinescu), West University of Timisoara, Romania; Zselyke Pap, West University of Timisoara, Romania; Eusebiu Stefanu, West University of Timisoara, Romania; Bianca Popescu, West University of Timisoara, Romania; Marian Ilie, West University of Timisoara, Romania; Delia Virga, West University of Timisoara, Romania

Students' situational boredom: Typology and relations to the requirement-skill fit

Lina Wirth, Leuphana University Lueneburg, Germany; Poldi Kuhl, Leuphana Universität Lüneburg, Germany; Timo Ehmke, Leuphana Universität Lüneburg, Germany; Jan Retelsdorf, University of Hamburg, Germany; Burak Aydin, Leuphana University Lueneburg, Germany

ANNOTATIONS:

PLEASE NOTE THAT THIS SESSION ROOM HAS CHANGED FROM AUTH_TE1 TO UOM_A08.

Session U: 7

Time: 16:30-18:00

Location: AUTH_TE2

SINGLE PAPER: GAME-BASED LEARNING IN MATHS AND ECONOMICS**Chair**

Kiat Hui Khng, National Institute of Education/Nanyang Technological University, Singapore, Singapore

Effects of an Adaptive Math Learning Program on Students' Performance, Self-Concept and Anxiety

Anna Hilz, IPN - Leibniz Institute for Science and Mathematics Education, Germany; Karen Aldrup, IPN - Leibniz Institute for Science and Mathematics Education, Germany

The Strength and Direction of the Adaptation Affect Situational Interest in Game-Based Math Learning

Antti Koskinen, University of Tampere, Finland, Finland; Jake McMullen, University of Turku, Finland; Minna Hannula-Sormunen, University of Turku, Finland; Manuel Ninaus, University of Graz, Austria; Kristian Kiili, Tampere University, Finland

The Effectiveness of an Adaptive Digital Educational Game to Enhance Fraction Understanding

Febe Demedts, University of Leuven - Campus KULAK, Belgium; Bert Reynvoet, KU LEUVEN, Belgium; Delphine Sasanguie, Hogeschool Gent, Belgium; Manuel Ninaus, University of Graz, Austria; Kristian Kiili, Tampere University, Finland; Fien Depaeppe, KU Leuven, Belgium

Serious Games in Economics Education: The influence of game mechanics and reflection prompts

Liane Platz, University of Konstanz, Germany; Michael Jüttler, University of Konstanz, Germany

Session U: 8

Time: 16:30-18:00

Location: UOM_A13

SINGLE PAPER: MOTIVATIONAL BELIEFS AND ATTAINMENT**Chair**

Charlotte Arnou, KU Leuven (BE), Belgium

Motivation and attainment: a systematic review of recent studies

Daniel Muijs, Queen's University Belfast, United Kingdom

Adolescents' expectancies and values in phenomenon-based learning and various school subjects

Inka Ronkainen, University of Helsinki, Finland; Janica Vinni-Laakso, University of Helsinki, Finland; Katariina Salmela-Aro, Helsinki University, Finland; Veli-Matti Vesterinen, The University of Helsinki, Finland

Changes in students' interest, competence and choice towards science learning on a long-term setting

Moonika Teppo, University of Tartu, Estonia; Miia Rannikmäe, University of Tartu, Estonia; Regina Soobard, University of Tartu, Estonia

Teaching to the test - killing students' motivation for the sake of good grades?

Joy Muth, University of Vienna, Austria; Marko Lüftenegger, University of Vienna, Austria

Session U: 9

Time: 16:30-18:00

Location: AUTH_DC2

SINGLE PAPER: PARTICIPATORY RESEARCH, SCIENCE COMMUNICATION AND DIALOGIC PEDAGOGY**Chair**

Gabriel Fortes, Universidad Alberto Hurtado, Chile

Participatory Research with youth as a Panacea for Educational Inequalities? A Meta-ethnography

Aline Muff, The Hebrew University of Jerusalem, Israel; Aviv Cohen, The Hebrew University of Jerusalem, Israel

Social disadvantage, classroom talk and educational attainment: RCT of a dialogic teaching programme

Jan Hardman, University of York, United Kingdom

Visualizing Effect Sizes for SciComm: Which Plot Types and Enrichment Options Support Sense-Making?

Jürgen Schneider, DIPF | Leibniz Institute for Research and Information in Education, Germany; Kirstin Schmidt, University of Education Karlsruhe, Germany; Kristina Bohrer, University of Education Karlsruhe, Germany; Andreas Lachner, University of Tübingen, Germany; Samuel Merk, PH Karlsruhe, Germany

Dialogic Problematization of Academic Integrity Education

Mark Smith, Kean University, United States

Session U: 10

Time: 16:30-18:00

Location: UOM_A04

SINGLE PAPER: SOCIAL PROCESSES IN COMPUTER-SUPPORTED COLLABORATIVE LEARNING**Chair**

Julie Vaiopoulou, Aristotle University of Thessaloniki, Greece

Investigating productive social interaction and the development of a group atmosphere in CSCL

Azusa Nakata, University of Oulu, Finland; Karel Kreijns, Open University of the Netherlands, Netherlands; Armin Weinberger, Saarland University, Germany; Marija Milosevic, Saarland University, Germany; Hanna Jarvenoja, University of Oulu, Finland

Making invisible visible— Exploring social processes of remote collaborative problem solving

Johanna Pöysä-Tarhonen, University of Jyväskylä, Finland; Shupin Li, University of Jyväskylä, Finland; Jarkko Hautala, Niilo Mäki Institute, Finland; Nafisa Awwal, University of Melbourne, Australia; Päivi Häkkinen, University of Jyväskylä, Finland

Group Learning or Learning Group? A Social Network Analysis on Group Regulated Learning

Mathias Mejeh, University of Bern, Switzerland

Measuring collaborative problem-solving skills in primary and secondary school students

matias rojas, Universidad Diego Portales, Chile; Miguel Nussbaum, Pontificia Universidad Católica de Chile, Chile; César Moreno, Red Educacional los Conquistadores, Chile; Camila Rojas, Red Educacional los Conquistadores, Chile

Session U: 11

Time: 16:30-18:00

Location: UOM_R09

SINGLE PAPER: THINKING AND REASONING IN SCIENCE EDUCATION**Chair**

Monika Waldis, University of Applied Sciences Northwestern Switzerland, Switzerland

The context matters: Exploring students' use of the resonance concept in organic chemistry tasks

Irina Braun, Justus-Liebig-University Giessen, Germany; Nicole Graulich, Justus-Liebig-University Giessen, Germany

Disclosing own reasoning while appraising others'. Implications for formative assessment development

Mariana Orozco, University of Twente, Netherlands

Examining all the evidence: Do undergraduates prioritize a review of studies over a single study?

Etsuji Yamaguchi, Kobe University, Japan; Clark Chinn, Rutgers University, United States; Hiroki Oura, Tokyo University of Science, Japan; Toshio Mochizuki, Senshu University, Japan

Students' Metacognitive Understanding of Apt Epistemic Performance in Science

Huma Hussain-Abidi, Rutgers University Graduate School of Education, United States; Clark Chinn, Rutgers University Graduate School of Education, United States; Kyle Hunker, Rutgers Graduate School of Education, United States; Susan Yoon, University of Pennsylvania, United States; Noora Noushad, University of Pennsylvania, United States; Thomas Richman, University of Pennsylvania, United States; Amanda Cottone, University of Pennsylvania, United States

Session U: 12

Time: 16:30-18:00

Location: AUTH_T202

SINGLE PAPER: SIMULATION-BASED LEARNING IN VOCATIONAL EDUCATION**Chair**

Raija Hämäläinen, University of Jyväskylä, Finland

Measuring the Collaborative Diagnostic Problem Solving Process in Automotive Malfunction Diagnosis

Dave Rexhäuser, Technische Universität Dresden, Germany; Stephan Abele, Chair of Vocational Education, Institute of Educational Vocation and Vocational Didactics, Germany; Anika Radkowitzsch, Leibniz Institute for Science and Mathematics Education (IPN), Germany; Constanze Richters, Ludwig-Maximilians-Universität (LMU), Germany; Louise Kaseler, TU Dresden, Germany; Peter Hesse, TU Dresden, Germany; Inga Glogger-Frey, University of Erfurt, Germany; Julius Meier, University Erfurt, Germany

How Role Power & Social Persuasion Relate to Self-Efficacy & Performance in a Role-Play Simulation

Dorothy Duchatelet, Open Universiteit, Department of Online Learning and Instruction, Netherlands; Leen Catrysse, Open Universiteit, Department of Online Learning and Instruction, Belgium

Social Experiences During Verbal and Video-Assisted Debriefings

Stefan Hanus, University of Regensburg, Germany; Helen Jossberger, University of Regensburg, Germany; Hans Gruber, University of Regensburg, Germany

Scaffolding in healthcare simulation training

Pauliina Rikala, University of Jyväskylä, Finland; Aaron Peltoniemi, University of Jyväskylä, Finland; Minna Ruoronen, University of Jyväskylä, Finland; Kaisa Silvennoinen, University of Jyväskylä, Finland; Raija Hämäläinen, University of Jyväskylä, Finland

Session U: 13

Time: 16:30-18:00

Location: AUTH_T102

SINGLE PAPER: MATH SELF-CONCEPT**Chair**

Ana Rodrigues de Lemos, Faculty of Psychology and Educational Sciences of the University of Porto, Portugal

The Implications of Math Self-Concept Decline Among High-Ability and Average-Ability Students

Alicia Ramos, KU Leuven, Belgium; Karine Verschueren, KU Leuven, Belgium

Mathematics self-concept, self-beliefs, and performance for mid-adolescent New Zealanders

Penelope Watson, University of Auckland, New Zealand; Bernhard Ertl, Universität der Bundeswehr, Germany; Shengnan Wang, The University of Auckland, New Zealand

Becoming a "math-person": Interplay between achievement emotions, motivation and math identity

Barbara Blažanin, Faculty of Philosophy, University of Belgrade, Serbia; Jelena Radisic, University of Oslo, Norway; Ksenija Krstic, University of Belgrade, Serbia; Katarina Mičić, University of Belgrade, Faculty of Philosophy, Serbia

Peer Spillover and Big-Fish-Little-Pond- Effects with SIMS80: Resolving a Theoretical Paradox?

Ioulia Televantou, European University Cyprus, Cyprus; Herbert W. Marsh, Australian Catholic University, Australia; Kate Xu, Open University of the Netherlands, Netherlands; Jiesi Guo, Australian Catholic University, Australia; Theresa Dicke, Australian Catholic University, Australia

Session U: 14

Time: 16:30-18:00

Location: UOM_R05

SINGLE PAPER: SOCIAL MEDIA: LEARNING, ANXIETY AND STRESS**Chair**

Alexandra Gkloumpou, Aristotle University of Thessaloniki, Greece

A gamified approach to examining health literacy and information sharing among ethnic populations

Giovanna Morara, University of South Carolina, Italy; Shea Ferguson, University of South Carolina, United States; Melissa Duffy, University of South Carolina, United States; Gregory Trevors, University of South Carolina, United States

Reasons and consequences for media multitasking during studying – an experience sampling approach

Lauri Hietajärvi, University of Helsinki, Finland; Erika Maksniemi, University of Helsinki, Finland; Jussi Järvinen, University of Helsinki, Finland; Elina E. Ketonen, University of Helsinki, Finland; Kirsti Lonka, University of Helsinki, Finland; Katariina Salmela-Aro, Helsinki University, Finland

Is experience of digital stress more harmful for schooling than social media use before bedtime?

Erika Maksniemi, University of Helsinki, Finland; Elina E. Ketonen, University of Helsinki, Finland; Kirsti Lonka, University of Helsinki, Finland; Reito Visajaani Salonen, Helsinki Institute for Social Sciences and Humanities, University of Helsinki, Finland; Katariina Salmela-Aro, Helsinki University, Finland

Session U: 15

Time: 16:30-18:00

Location: UOM_A11

SINGLE PAPER: CRITICAL THINKING IN HIGHER EDUCATION**Chair**

Minna Törmänen, University of Teacher Education in Special Needs Zurich, Switzerland; University of Helsinki, Finland, Switzerland

Associations of critical thinking with educational and socioeconomic background of Finnish students

Heidi Hyytinen, University of Helsinki, Finland; Kari Nissinen, University of Jyväskylä, Finland; Katri Kleemola, University of Helsinki, Finland; Jani Ursin, University of Jyväskylä, Finland

Promoting university students' scientific thinking development: a perspective of university teachers

Mari Murtonen, University of Turku, Finland; Heidi Salmento, University of Turku, Department of Teacher Education, Finland

Cognitive in context: How course-taking breadth supports skill formation in emerging adults

Gabe Orona, University of Tübingen, Germany

Characteristics, Context, and Conditions: A Systematic Review of Critical Thinking Interventions

Eric Schoute, University of Maryland, United States

Session U: 16

Time: 16:30-18:00

Location: AUTH_T002

SINGLE PAPER: ARTIFICIAL INTELLIGENCE IN SCHOOLS**Chair**

Loren Marulis, Connecticut College, United States

Teachers' and parents' attitudes towards the use of AI technology in school

Janne Paula Mesenhöller, University of Potsdam, Germany; Katrin Böhme, University of Potsdam, Germany

Preservice teacher discourse with AI-integrated virtual students: A look at sentence function

Alex Barrett, Florida State University, United States; Chih-Pu Dai, Florida State University, United States; Luke West, Florida State University, United States; Saptarshi Bhowmik, Florida State University, United States; Nuodi Zhang, Florida State University, United States; Fengfeng Ke, Florida State University, United States

Chatting with the past, developing a chatbot for history education

Albert Logtenberg, ICLON-Leiden University Graduate School of Teaching, Netherlands; Nadira Saab, Leiden University, Netherlands; Ron Pat-El, Open University, Netherlands

Using Machine Learning to Understand how the Predictors of Maths Ability Change over Time

Rosa Lavelle-Hill, University of Copenhagen, Denmark; Stephanie Lichtenfeld, Universität Hamburg, Germany; Reinhard Pekrun, University of Essex, United Kingdom; Michiko Sakaki, University of Tübingen, Germany; Kou Murayama, University of Tübingen, Germany

Session U: 17

Time: 16:30-18:00

Location: UOM_A03

SINGLE PAPER: EYE TRACKING STUDIES ON TEACHING**Chair**

Aline Alves-Wold, University of Stavanger, Norway

Expertise in interpreting historical images: An eye-tracking study

Marjaana Puurtinen, University of Turku, Finland; Johanna Kaakinen, University of Turku, Finland; Halszka Maria Jarodzka, Open Universiteit, Department of Online Learning and Instruction, Netherlands

Promoting Professional Vision through Minimal Intervention: An Eye-Tracking Study

Sylvia Gabel, Universität Augsburg, Germany; Andreas Gegenfurtner, University of Augsburg, Germany

Did I see it all? - Prompting Preservice Teachers' Noticing During Teaching

Leonie Telgmann, Leibniz University Hannover, Germany; Katharina Mueller, Leibniz University Hannover, Germany

Disfluency as Moderator for the Seductive Details Effect: An Eye-Tracking Investigation

Sophia Christin Weissgerber, University of Kassel, Germany; Ralf Rumber, University of Kassel, Germany

Session U: 18

Time: 16:30-18:00

Location: UOM_R02

POSTER PRESENTATION: GAME-BASED LEARNING AND IMMERSIVE TECHNOLOGIES IN STUDYING LEARNING, INSTRUCTION AND MOTIVATION**Chair**

Therese Hopfenbeck, University of Melbourne, Australia

In-game performance and the role of students' socioeconomic status, self-efficacy and interest

Michaela Arztmann, Utrecht University, Netherlands; Jessica Lizeth Domínguez Alfaro, KU Leuven - University of Leuven, Belgium; Lisette Hornstra, Utrecht University, Netherlands; Johan Jeurink, Utrecht University, Netherlands; Liesbeth Kester, Utrecht University, Netherlands

PandHEMOT®: An App for Children and Adolescents to Foster Pandemic-Related Emotional Competence

Giada Vicentini, University of Verona, Italy; Daniela Raccanello, University of Verona, Italy; Emmanuela Rocca, University of Verona, Italy; Roberto Burro, University of Verona, Italy

"Try to contaminate patients and objects": Effects of discovery instructions in VR

Juliette Desiron, University of Zürich, Switzerland; Aline Wolfensberger, Department of Infectious Diseases and Hospital Epidemiology, University Hospital Zurich, Switzerland; Dominik Petko, University of Zurich, Switzerland

Online intervention program for first graders to close pre-reading skills gaps

Renáta Kiss, University of Szeged Institute of Education, MTA-SZTE Digital Learning Technologies Research Group, MTA-SZTE Research Group on the Development of Competencies, Hungary; Katalin Szili, Hungarian University of Agriculture and Life Sciences, Institute of Education, Hungary; Dora Mokri, Szeged Center for Research on Learning and Instruction!, Hungary; Benő Csapó, University of Szeged, Hungary; Gyöngyvér Molnár, University of Szeged, MTA-SZTE Digital Learning Technologies Research Group, Hungary

Addressing the Climate Crisis in Higher Education: Game Design for Transformative Learning

Pia Spangenberg, Universität Potsdam, Germany; Linda Kruse, Hochschule Mainz / University of Applied Sciences, Germany; Anja Schultze-Krumbholz, Technische Universität Berlin, Department of Educational Psychology, Germany; Mandy Singer-Brodowski, Freie Universität Berlin, Germany

Design, Development and Implementation of VR Serious Games for Science in a Postsecondary Context

Christine Marquis, Cégep de Saint-Jérôme, Canada; Bruno Poellhuber, University of Montreal, Canada; Sébastien Wall-Lacelle, Cégep de Saint-Jérôme, Canada; Audrey Groleau, Université du Québec à Trois-Rivières, Canada; Normand Roy, University of Montreal, Canada

From Awareness to Adjustment: A Teacher's Local Adaptation of a Game-based Learning Environment

Tianshu Wang, Indiana University, United States; Krista D. Glazewski, Indiana University, United States; Haesol Bae, Indiana University, United States; Chen Feng, Indiana University, United States; Daeun Hong, Indiana University, United States; Cindy E. Hmelo-Silver, Indiana University, United States; Seung Lee, North Carolina State University, United States; Bradford W. Mott, North Carolina State University, United States; James C. Lester, North Carolina State University, United States

Session U: 19

Time: 16:30-18:00

Location: UOM_R01

POSTER PRESENTATION: GENDER ISSUES IN EDUCATION**Chair**

Lisa Dewulf, Ghent University, Belgium

Global crisis and increase in domestic violence. Education as a force for change

Rossella Marzullo, University of Reggio Calabria Mediterranean, Italy

Researching youth voices on Comprehensive Sex Education: a systematic review of qualitative studies

Carolina Trivelli, University of Verona, Italy

Exploring gender differences in Coding at the beginning of Primary school

Costanza Padova, University of Padova, Italy, Italy; Chiara Montuori, Università di Padova, Italy; Lucia Ronconi, Università di Padova, Italy; Tullio Vardanega, Università di Padova, Italy; Barbara Arfé, University of Padova, Italy

Self-efficacy and utility value as predictors of adolescents' intentions to study science subjects

Erin Mackenzie, Western Sydney University, Australia; Kathryn Holmes, Western Sydney University, Australia; Nathan Berger, Western Sydney University, Australia

Empowering e-learning relationships: refugee women explore civics during the lock-down in Greece

Agapi Chouzouraki, UNIVERSITY OF MACEDONIA, Greece; Ioanna Papavassiliou-Alexiou, University of Macedonia, Greece

Session U: 20

Time: 16:30-18:00

Location: UOM_A10

ICT DEMONSTRATION: SUPPORTING MULTIMODAL INQUIRY SCIENCE LEARNING WITH A DIGITAL NOTEBOOK

Supporting Multimodal Inquiry Science Learning with a Digital Notebook

Sadhana Puntambekar, University of Wisconsin, United States; Dana Gnesdlow, University of Wisconsin-Madison, United States; William Goss, University of Wisconsin-Madison, United States; Indrani Dey, University of Wisconsin-Madison, United States

Session U: 21

Time: 16:30-18:00

Location: AUTH_DC3

ICT DEMONSTRATION: NSTUDY: A SOFTWARE SYSTEM FOR TRACING LEARNING

nStudy: A software system for tracing learning

Philip Winne, Simon Fraser University, Canada