



Advancing (Digital) Learning Discourse

in Teaching, Teacher Education, and Teachers' Professional Development

September 4th to 9th 2022, Monte Verità, Ascona

Updated Conference Program (August 24th, 2022)

Conference Program

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Location:

The conference takes place in a beautiful historical venue: the Monte Verità conference centre in Ascona, Switzerland. Monte Verità rises on the hills on the north shore of Lago Maggiore, and has always been a magnetic pole of convergence of ideas, trends, experiments, and historical figures. Immersed in the quiet and green of a park of more than 7 hectares, with an incomparable view of the lake and the nearby mountains, it offers visitors a unique experience.

see [p.57](#) for our transfers to Monte Verità

Organization:



Prof. Dr.
Fritz Staub



Dr. Eva Susann
Becker



Dr. Sog Yee
Mok

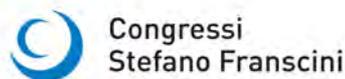


Samantha
Schlegel



Sina
Schatzmann

Sponsors:



Welcome to the ADLD Conference

It is a great honor and pleasure for the local organizing committee to welcome you at Monte Verità, Ascona.

The field of (digital) learning discourse has grown considerably in the last years. Productive discourse (i.e., communicating knowledge or sharing ideas reciprocally in a co-constructive way) can positively affect student learning (through classroom talk guided by teachers) and teacher learning (through collaborative planning and reflection). Thus, learning to orchestrate learning discourse is essential for (prospective) teachers and teacher educators.

We are looking forward to this unique opportunity for scientific knowledge transfer that may have the potential to advance practices in teacher education and teaching in classrooms across the globe.



Program Overview

	Sunday Arrival Day	Monday Focus: Different Research Approaches to Learning Discourse	Tuesday Focus: Teachers' Professional Development
9:00		9.00 am	9.00 am
9:30		Welcome Words & Keynote I ⌚ 80 min	Organizational Notes & Keynote IV ⌚ 80 min
10:00		COFFEE-BREAK ⌚ 30 min	COFFEE-BREAK ⌚ 30 min
10:30			
11:00		Keynote II ⌚ 60 min	Keynote V ⌚ 60 min
11:30			
12:00		Plenary Discussion ⌚ 40 min	Plenary Discussion ⌚ 40 min
12:30			
12:30		LUNCH-BREAK ⌚ 90 min	LUNCH-BREAK ⌚ 90 min
13:00			
13:30			
14:00			
14:30		Workshop Session (Workshops A-C) ⌚ 120 min	Workshop Session (Workshops D-F) ⌚ 120 min
15:00			
15:30			
16:00	3pm Check-In / Registration	COFFEE-BREAK ⌚ 30 min	COFFEE-BREAK ⌚ 30 min
16:30		Keynote III ⌚ 60 min	Poster-Session I ⌚ 90 min
17:00		Plenary Discussion / Insights of the Day ⌚ 45 min	
17:30		Insights of the Day ⌚ 30 min	
18:00	6.15 pm Welcome Drink 🍷	EVENING-BREAK ⌚ 45 min	EVENING-BREAK ⌚ 30 min
18:30			
19:00	Dinner & Movie Night 🎬	7.00 pm Dinner	7.00 pm Dinner
19:30			
		Moderator: Frank Crasborn	Moderator: Annelies Kreis

	Wednesday Focus: Talk Moves & Instruments	Thursday Focus: Digital Tools & Remote Learning Settings	Friday Focus: Consolidation
9:00	9.00 am	9.00 am	9.00 am
9:30	Organizational Notes Keynote VI ⌚ 80 min	Organizational Notes & Keynote VIII ⌚ 80 min	Organizational Notes & Keynote X ⌚ 80 min
10:00	COFFEE-BREAK ⌚ 30 min	COFFEE-BREAK ⌚ 30 min	COFFEE-BREAK ⌚ 30 min
10:30			
11:00	Keynote VII ⌚ 60 min	Keynote IX ⌚ 60 min	Podium Discussion & Closing Remarks ⌚ 60 min
11:30	Plenary Discussion ⌚ 40 min	Plenary Discussion ⌚ 40 min	
12:00	LUNCH-BREAK ⌚ 60 min	LUNCH-BREAK ⌚ 90 min	Collection of Lunch Bags / Departure from 12:30 onwards
12:30			
13:00	Poster-Session II ⌚ 60 min		
13:30	BREAK ⌚ 30 min	Small Group Work (Workshop G) ⌚ 120 min	
14:00			
14:30			
15:00			
15:30			
16:00	3.00 pm Social /Touristic Event to Brissago Islands with botanical garden	COFFEE-BREAK ⌚ 30 min	
16:30		Poster-Session III ⌚ 90 min	
17:00		Insights of the Day ⌚ 15 min	
17:30		EVENING-BREAK ⌚ 30 min	
18:00			
18:30			
19:00		6.45 pm Dinner ⌚ 90 min	
19:30			
20:00	Dinner off-site	8.15 pm Public (Online) Event ⌚ 75 min	
20:30			
	Moderator: Fritz Staub	Moderator: Dominik Petko	Moderator: Kurt Reusser

Keynote Sessions & Plenary Discussions

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PD	various Discussants / Moderators	Plenary Discussions / Insights of the Day Public Plenary Discussion on Digital Learning Discourse	p.17-18 p.51

Workshops

A	Dr. Helma De Keijzer & Prof. Dr. Frank Crasborn	Coaching teachers' moral learning in professional learning communities	p.19
B	PD Dr. Christian Rüede, Prof. Dr. Fritz Staub et al.	Comparing in productive classroom discourse; Teacher initiated student justifications as a mediator for student learning (UPDATET TIME SLOT)	p.20
C	Prof. Dr. Annelies Kreis, Prof. Dr. Esther Brunner et al.	Analyzing lesson dialogues during practica from a general and mathematics education perspective	p.21
D	Dena Zook-Howell & Dr. Lindsay Clare Matsumura	Creating an integrated knowledge base for conferring that builds teachers' text discussion facilitation (NEW WORKSHOP)	p.22
E	Dr. Diemut Ophardt et al.	Productive talk in post-lesson conferences with preservice teachers: Theoretical criteria as a tool to enhance learning	p.23
F	Prof. Dr. Robbert Smit	The impact of interactive dialogue on students' learning of mathematical reasoning	p.24
G	Dr. Eva Susann Becker & Prof. Dr. Dominik Petko	Small Group Work: Teaching productive talk with digital tools: A virtual-reality scenario	p.25

Poster-Sessions

1	1.1 - Gabrielle Arengé <i>How, why and under what conditions does professional dialogue generate shifts in teaching practice</i> (p.27)	1.2 - Dr. Miriam Babichenko <i>Comparing the quality of video-based discussions in teacher communities</i> (p.28)	1.3 - Dr. Ricardo Böheim et al. <i>Teachers' discourse practice and its effects on classroom learning and student motivation</i> (p.29)	1.4 - Lydia Cao <i>Teachers' contingent responsiveness in dialogic science discussions</i> (p.30)
	1.5 - Oana Costache et al. <i>Student-teachers' uncertainty as a learning opportunity in mentoring conversations</i> (p.31)	1.6 - Prof. Dr. Annelies Kreis et al. <i>Learning processes during teaching practice as activity in social networks—an interdisciplinary study</i> (p.32)	1.7 - Dr. Sog Yee Mok et al. <i>PD program on comparing solution methods and classroom discourse in mathematics</i> (p.33)	1.8 - Jeannette Wick <i>Prototypical educational settings from special education teachers in inclusive classes – a video analysis</i> (p.34)
2	2.1 - Dr. Kathrin Futter et al. <i>Asymmetries in productive mentoring dialogues</i> (p.35)	2.2 - Prof. Dr. Alexander Gröschner et al. <i>Measuring classroom dialogue from student perspectives: Validating the Dialogic Teaching Questionnaire (DTQ-S)</i> (p.36)	2.3 - Christian Hämmerle et al. <i>Fostering strategy flexibility with subject matter content in classroom discourse</i> (p.37)	2.4 - Maurus Küttel et al. <i>Opportunities to learn for flexibility in solving quadratic equations: Analysis of tasks posed in grammar schools</i> (p.38)
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3	3.1 - Chiara Antonietti et al. <i>The influence of teachers' knowledge and beliefs on interactive learning activities supp. by technology use</i> (p.43)	3.2 - Katerijne Barbier et al. <i>The impact of Research Lesson Study on teachers' beliefs about and educational practices for high-ability students</i> (p.44)	3.3 - Christine Ladehoff et al. <i>Ask the students! Development of a school student feedback tool for post-lesson conf. in teacher education</i> (p.45)	3.4 - Qian Liu (VIRTUAL) <i>Engaging Chinese students in blended dialogue mediated by online interactive platforms in primary mathematics classes</i> (p.46)
	3.5 - Benjamin Roth et al. <i>Classroom talk as a complex dynamic system: Depicting dialogue in State Space Grids</i> (p.47)	3.6 - Iris Tanner et al. <i>Knowledge construction in teacher-led small groups: A qualitative process analysis on solving mathematical word problems</i> (p.48)	3.7 - Marguerite Walsh et al. <i>The influence of exclusionary framings on teacher sensemaking and dialogic discussion practice</i> (p.49)	3.8 - Edith Bouton et al. (NEW) <i>Revisiting Revoice - Distinguishing between teacher facilitation moves in classroom dialogue</i> (p.50)

Keynote Session I

Learning discourse in teaching, teacher education and teachers' professional development

Prof. Dr. Fritz Staub, University of Zurich, Switzerland
Monday, September 5th, 9.30 am, Auditorium

Prof. Dr. Fritz C. Staub is Professor of Upper-Secondary Education Studies and Research on Learning and Teaching at the University of Zurich. He was a leading developer of Content-Focused Coaching in professional development and pre-service teacher education. He conducted various research projects on the implementation and effects of this approach in teacher education for different levels of schooling. His research interests are mentoring and coaching in teacher education and professional development as well as classroom research on productive classroom talk. He will give the introductory keynote of the conference that aims to combine the different research strands on orchestrating productive learning discourses in classrooms with discourse on teaching aiming to advance teacher learning.



Keynote Session II

ICAP: An active learning theory that can guide teacher-student dialogues

Prof. Dr. Michelene Chi, Mary Lou Fulton Teachers College / Arizona State University, USA
Monday, September 5th, 10.50 am, Auditorium

Prof. Dr. Michelene (Micki) T.H. Chi is a Regents Professor in the Mary Lou Fulton Teachers College, at Arizona State University. She is a cognitive and learning science researcher and internationally known for developing the ICAP framework. Professor Chi is also interested in instructional videos for online learning and proposes that videos of tutorial dialog are more effective for student learning than didactic monolog videos.

Prof. Chi received multiple lifetime achievements awards, including the Distinguished Contributions to Research in Education Award from AERA in 2016, the Rumelhart Prize from Cognitive Science in 2018, the McGraw Prize in Education in 2020, and the William James Fellow from Association for Psychological Science in 2021.



In her talk she will briefly describe the ICAP framework and empirical results from K-12 classrooms that suggest how teachers can elicit higher Constructive mode of classroom interactions. ICAP is an evidence-based theory of active learning. ICAP claims that students can be active in four different ways or modes while learning. These four modes can be discriminated by students' overt behaviors and the outputs such behaviors produce (such as in the notes they take, or their discourse moves). The four modes of overt behaviors are: Interactive (or learning collaboratively), Constructive (or learning generatively), Active (learning manipulatively), and Passive (learning by paying attention). The four modes result in descending levels of student learning, so that ICAP can accurately predict learning outcomes in the I>C>A>P order. ICAP can be used to identify the mode of students' engagement in the context of their activities, exercises and discourse moves, as well as guide the modification of lessons for improving students' cognitive engagement and thereby increasing their learning.

Keynote Session III

New and old frontiers in the study of dialogic learning and teaching

Prof. Dr. Christa Asterhan, Hebrew University of Jerusalem, Israel

Monday, September 5th, 4.30 pm, Auditorium



Prof. Dr. Christa Asterhan is Associate Professor at the Seymour Fox School of Education at the Hebrew University of Jerusalem. In her research, she explores the cognitive and social dimensions of learning through human-human verbal interaction, using multidisciplinary, multi-method approaches. In her keynote titled "New and old frontiers in the study of dialogic learning and teaching" she will discuss, in broad strokes, the main issues that scholars of dialogic learning and teaching seem to have converged on, as well as outline several new frontiers that are currently being explored.

Keynote Session IV

Fostering classroom talk in Switzerland:

Results from a teachers' professional development study

Prof. Dr. Christine Pauli, University of Fribourg, Switzerland &
Prof. em. Dr. Kurt Reusser, University of Zurich, Switzerland
Tuesday, September 6th, 9.15 am, Auditorium



Prof. Dr. Christine Pauli is a professor in the Department of Educational Sciences at the University of Fribourg. Prof. em. Dr. Kurt Reusser is a former professor Research on Learning, Instruction, and Didactics at the University of Zurich. They both have conducted extensive research on dialogic classroom talk. In their keynote session entitled "Fostering classroom talk in Switzerland - results from a teachers' professional development study" they will present data from the Socrates 2.0 project in which they elaborated if and how teachers might be enabled to improve their whole-class discussions towards a more dialogic, student-activating and subject-specific talk.

Keynote Session V

Professional development for productive learning discourse

Prof. Dr. Hilda Borko, Stanford University, USA
Tuesday, September 6th, 10.50 am, Auditorium



Prof. Dr. Hilda Borko is the Charles E. Ducommun Professor of Education at the Stanford Graduate School of Education. She is a former president of the American Educational Research Association and a member of the U.S. National Academy of Education. She is internationally known for her research on learning to teach, the impact of teacher professional development programs on teachers and students, and the preparation of professional development leaders.

Prof. Borko's current projects include partnerships with local school districts to improve teaching and professional development in mathematics and science, and to build capacity within the school districts to prepare and support professional development leaders. Her keynote entitled "Professional development for productive learning discourse" will focus on the mathematics partnership. Prof. Borko will discuss the use of classroom video as a professional development tool to support teacher' analysis of students' mathematical understanding and participation in groupwork, and as a research tool to study teacher learning.

Keynote Session VI

Scaling up teachers' use of productive talk moves

Prof. Dr. Sarah Michaels, Clark University, USA
Wednesday, September 7th, 9.15 am, Auditorium

Prof. Dr. Michaels research focusses on academically productive talk from pre-kindergarten through high school. She is working on curriculum and professional development so that it focuses central attention on rigorous, coherent, and equitable classroom discourse. Michaels is also a co-author of the suite of tools, *Accountable Talk: Classroom Conversation that Works* (in collaboration with the Institute for Learning at the University of Pittsburgh), which is currently being used in large urban districts throughout the US. In promoting teacher research, she works to support teachers as theorizers, curriculum innovators, and educational leaders who use the tools of discourse analysis in generating new and useable knowledge for improving instruction and student learning in their own and others' classrooms. Her keynote is entitled "Scaling up teachers' use of productive talk moves".



Keynote Session VII

Advancing teachers' enactment of high-quality classroom discourse through (web-meditated) Content-Focused Coaching

Prof. Dr. Lindsay Clare Matsumura, University of Pittsburgh, USA
Wednesday, September 7th, 10.50 am, Auditorium



Dr. Lindsay Clare Matsumura is a Professor in the Department of Teaching, Learning, and Leading. She holds a joint-appointment as a Senior Scientist at the Learning Research and Development Center, where she co-directs the Institute for Learning. Her research centers around literacy instruction and learning. She is especially interested in understanding processes of teacher learning to enact dialogic instruction through remote literacy coaching, the use of artificial intelligence to improve formative feedback and students' text-based argument writing, and the integration of reading and writing in both face-to-face and online classrooms.

Keynote Session VIII

Analyzing dialogue in technology-mediated educational contexts

Prof. Dr. Sara Hennessy, University of Cambridge, United Kingdom

Thursday, September 8th, 9.15 am, Auditorium

Prof. Dr. Sara Hennessy is a Professor of Teacher Development and Pedagogical Innovation at the Faculty of Education, University of Cambridge. Her research is executed in both UK and low-income country contexts and focuses on classroom dialogue, across subject areas and in contexts with and without technology. She also researches the educational uses of digital technology, from a sociocultural perspective and is interested in assessing the impacts of teacher professional development and inquiry, creating supporting interactive multimedia resources.

Prof. Dr. Hennessy is a founding member and co-leader of the Cambridge Educational Dialogue Research (CEDiR) Group.



This keynote talk explores the role that digital technology can play in mediating dialogue that is productive for learning. It considers the methods that researchers and teachers can use to understand the learning taking place in technology-supported settings where nonverbal or multimodal interactions with digital knowledge artefacts take place. These interactions can support rich new forms of dialogue that highlight differences between participants' perspectives and make ideas and reasoning processes more explicit. It presents a new 12-category coding scheme, Tech-SEDA (adapted from SEDA, the Cam-UNAM Scheme for Educational Dialogue Analysis developed by Hennessy, Rojas-Drummond et al., 2016). Application is illustrated with examples of dialogic interaction across diverse technology uses by learners located in classrooms or remotely. The talk discusses the methodological issues around capturing dynamic multimodal dialogue as it unfolds in real time.

Keynote Session IX

Digital technologies and digitalized dialogues for the advancement of classroom dialogue across subjects

Prof. Dr. Sten Ludvigsen, University of Oslo, Norway
Thursday, September 8th, 10.50 am, Auditorium



Prof. Dr. Sten Ludvigsen is Professor in Learning and Digitalization in the Faculty of Education at the University of Oslo. He has been carrying out research on how to foster social and cognitive skills using digital learning resources in the educational sector and in workplace settings. Prof. Ludvigsen has long experience in academic leadership and in research education teaching, supervision and leadership at both international, national and university level. He led and chaired numerous educational research institutions, committees and networks. His keynote talk is entitled "Digital technologies and digitalized dialogues for the advancement of classroom dialogue across subjects".

Keynote Session X

On the relationship between student and teacher learning and why it matters for the advancement of teacher education and teacher professional development

Prof. Dr. Jan Vermunt, Eindhoven University of Technology, The Netherlands
Friday, September 9th, 9.15 am, Auditorium

Prof. Dr. Jan Vermunt is Professor of Learning Sciences and Educational Innovation at Eindhoven University of Technology and Scientific Director of Eindhoven School of Education. His expertise areas are the learning sciences, with a focus on teaching and student learning in higher education, and teachers' learning and professional development. In his work he tries to cross traditional boundaries between separate research communities, between communities of practice, and between research and practice to advance our knowledge about teachers' and students' learning. This final keynote session entitled "On the relationship between student learning and teacher learning and why it matters for the advancement of teacher education and teacher professional development" will draw attention to a more interconnected way to study productive learning discourses.





Moderators and Discussants

On each conference day, we have reserved time to discuss and focus on our main conference themes and questions.

- What can researchers focusing on classroom discourse to foster student learning and researchers focusing on discourses to foster teacher learning (such as coaching, mentoring or lesson studies) learn from each other?
- How can we combine different elements within approaches to effectively improve learning discourse in classrooms, teacher education, and teachers' professional development (also in remote learning settings)?
- How can digital tools support the development and the effective analysis of productive learning discourse

These plenary discussions and insights of each day are moderated by the organizing committee and the following experts.

Prof. Dr. Frank Crasborn, Fontys University, The Netherlands
Plenary Discussion and Insights of the Day,
Monday, September 5th

Frank Crasborn is Professor of Education at Fontys University in the Netherlands. As a teacher educator, educational consultant and researcher, he has been involved in the implementation of teacher education programs and school-based educational development projects. He also has been engaged in developing the network of professional development schools in the Dutch province of Limburg. Alongside his position at Fontys University, Frank Crasborn has worked as an associate professor at Maastricht University and the Open University of the Netherlands, and as a guest lecturer at the Institute of Education at the University of Zürich. Crasborn has received international recognition with his research on MEntor Roles In Dialogues (MERID-model) and the corresponding SMART-program (Supervision Skills for Mentors to Activate Reflection in Teachers) to foster learning productive dialogues in mentoring conversations. For several publications on the pedagogy of teacher education and teacher mentoring in the workplace, Crasborn and his co-authors received the annual Award for Distinguished Research in Teacher Education by the American Association of Teacher Educators (ATE) and the Dutch Association of Teacher Educators (VELON).





Moderators and Discussants

Prof. Dr. Annelies Kreis, Zurich University of Teacher Education, Switzerland
Plenary Discussion and Insights of the Day,
Tuesday, September 6th

Annelies Kreis is a professor and head of the department for secondary level I teacher education at University of Teacher Education Lucerne. Her research and professional development activities focus on coaching and mentoring during school-based practica, teacher collaboration and cooperative learning of in-service teachers, and social networks in higher education and teacher education. With this background and her great expertise in video-based discourse analysis, she will serve as a discussant on the third conference day at which we will focus on talk moves and specific instruments for productive talk. She will additionally present her current projects in Workshop Session C (see [p.21](#)) and Poster Session 1 (see [p.32](#)) together with her research team.



Prof. Dr. Dominik Petko, University of Zurich, Switzerland
Plenary Discussion and Insights of the Day,
Thursday, September 8th

Prof. Dr. Dominik Petko is a full professor of Teaching and Educational Technology and Director of the Teacher Education Program for Upper Secondary Education at the University of Zurich. As a recognized expert for digital technologies in teacher education, he will serve as a discussant on the fourth conference day at which we will focus on digital tools and remote learning settings.

Workshop Session I

A) Coaching teachers' moral learning in professional learning communities

Dr. Helma De Keijzer & Prof. Dr. Frank Crasborn,
Fontys University of Applied Sciences, The Netherlands

Monday, September 5th, 2.00 – 4.00 pm, Sala Eranos



Education in general and teaching as a specific professional activity is permeated with moral considerations, which makes teaching a moral endeavor. When interacting with pupils, teachers often need to decide how to act 'on the spur of the moment', while considering whether and how their actions will contribute to the goals of education, to the pupils' development, to the interests of pupils, and to the curriculum. These considerations are influenced by the teacher's own values and beliefs, which are often implicit, meaning teachers are not always aware of the impact of their actions for pupils.

Attention to teachers' moral practice is not widespread in professional development programs and there is a lack of guidelines on how to support (prospective) teachers' learning related to moral aspects of their teaching. To narrow this lack, a framework of moral learning for teachers was developed focuses on gaining a better understanding of own values and beliefs (frames of reference) and its implications for their teaching and their pupils. Moral learning is aimed as an expansion of consciousness or refining frames in what is seen as the best for pupils and is fostered through critical reflection and dialogue with peers and supported by a coach. Coaching teachers' moral learning focuses on questioning values, beliefs and bias, which is different from guiding the learning of (new) content knowledge or teaching skills. Hence, supporting and coaching moral learning is quite challenging and requires specific coaching approaches.

This workshop is inspired by two related studies investigating (the coaching of) teachers' moral learning. The first study aimed at understanding the moral dimension of teaching by developing a framework for teachers' moral learning. The study examined the changes caused by the moral learning process. The second study focused on identifying coaching approaches in professional learning communities (PLCs) to encourage teachers' moral learning. During the workshop, participants experience and discuss the framework for moral learning that was developed. Second, participants analyze and discuss examples of teachers' reflective dialogues in PLC's on moral learning, and coaching interventions that guided these dialogues. Finally, the value, challenges and hindrances of coaching teachers' moral learning for educational practice and research are discussed.

Workshop Session I

B) Comparing in productive classroom discourse; Teacher initiated student justifications as a mediator for student learning

PD Dr. Christian Rüede¹, Prof. Dr. Fritz Staub², Dr. Sog Yee Mok², lic. phil. Christian Hämmerle² & MA Maurus Küttel³

1: University of Applied Sciences and Arts Northwestern Switzerland; 2: University of Zurich, Switzerland; 3: Lucerne University of Teacher Education, Switzerland

Monday, September 5th, 2.00-4.00 pm, Sala Pioda & Sala von der Heydt



The presented study shows that enabling teachers to integrate comparing solution strategies into their teaching fosters student flexibility in algebra. We designed and investigated two professional development (PD) programs that either focused on comparing solution strategies, or additionally introduced the accountable talk approach to guiding productive classroom discussions. The effects of both PD programs were investigated in an experimental field study ($n = 39$ teachers, $k = 739$ students). At posttest, gains in both experimental groups in student strategy flexibility and procedural knowledge were greater than in the control group. The accountable talk group also increased conceptual knowledge. Significant effects in strategy flexibility were still observed 2.5 months later.

Further analysis showed that the effect of the accountable talk group on conceptual knowledge can be explained by student justifications during classroom discussions as mediator variable. In this analysis, we investigated whether the two PDs compared to the control group increased the number of student justifications, and whether this affected student performance (i.e., strategy flexibility, procedural knowledge, and conceptual knowledge). The results of our multilevel path models showed significant mediation effects in the accountable talk group on procedural and conceptual knowledge, but not strategy flexibility.

The workshop provides more insights into how these mediation effects of student justifications work in real classrooms. The basis for the joint elaboration and discussions in the workshop are two transcripts of classroom discussions in which multiple strategies were compared. One transcript is from the teaching of a teacher in the comparing group, the other from a teacher in the accountable talk group. The aim is to discuss similarities and differences that may explain why student justifications mediated effects on conceptual and procedural knowledge but not on strategy flexibility.

Workshop Session I

C) Analyzing lesson dialogues during practica from a general and mathematics education perspective

Prof. Dr. Annelies Kreis¹, Prof. Dr. Esther Brunner²,
Sonja Hiebler¹, Sanja Stankovic² & Dr. Marco Galle¹

1: University of Teacher Education Lucerne, Switzerland; 2: Thurgau University of Teacher Education, Switzerland

Monday, September 5th, 2.00 – 4.00 pm, Sala Balint



This workshop focuses on the interdisciplinary analysis of dyadic mentoring dialogues during school-based teacher education regarding the appearance of pedagogical knowledge, mathematics knowledge and mathematics teaching knowledge.

Pedagogical content-knowledge is regarded as an important object of teacher education, and therefore this also applies to learning during practica. This suggests a perspective beyond general pedagogical content on subject-specific teaching competencies for the design of opportunities to learn as well as the analysis of practice-situated learning processes. During practica, lesson dialogues are regarded as pivotal opportunities to learn for student teachers. Mentoring concepts for practica take this into account and organize mentoring support for student teachers regarding lesson planning, teaching and reflection with different actors such as mentor teachers, university- based mentors with a general or subject-specific educational background, or peers. It is expected that the content and other characteristics of interactions during lesson dialogues vary in relation to the roles and expertise of the interactants. Experiences however point to a strong focus on classroom management in lessons dialogues, and it remains open whether this focus changes to a more content-specific one if mentors have subject-specific teaching expertise and therefore would be expected to focus on the latter. In sum, there is a lack of research about differences between the content of mentoring by those different actors.

With the interdisciplinary SNF study "Student teacher learning in the social network of practice schools from a general and mathematics education perspective", learning processes are analyzed as activities in social networks and learning objects and outcomes as professional competencies. The focus of this mixed-methods study lies on learning opportunities for student teachers (N=60) for primary school (grades 1-6) firstly in the extended social network of a practicum and secondly, with a closer look, during conversations in four dyadic actor constellations that vary with respect to roles and general pedagogical and mathematics teaching competencies of the interactants.

In the interactive workshop we intend to present the theoretical background, research design and methods for the interdisciplinary analysis of lesson dialogues. We explain a manual for the basic coding of the content of video-recorded and transcribed lesson dialogues in four actor constellations which differentiates general pedagogical and mathematical pedagogical content. This manual will be applied by participants to the coding of exemplary sequences of transcribed lesson dialogues. Results of the participants coding will be compared and discussed. Finally, we will present a preview of more detailed further coding steps.

Workshop Session II

D) Creating an integrated knowledge base for conferring that builds teachers' text discussion facilitation.

Dena Zook-Howell & Prof. Dr. Lindsay Clare Matsumura
University of Pittsburgh, US

Tuesday, September 5th, 2.00 – 4.00 pm, Sala Eranos



Dena Zook-Howell and Lindsay Clare Matsumura both work with the Learning Research & Development Center at University of Pittsburgh at the Institute for Learning. Their work with the Institute focuses on Content-Focused Coaching (CFC). Prof. Matsumura's research interests are outlined on [p. 13](#).

Dena Zook-Howell designed and implemented professional learning to deepen conceptual understanding of literacy processes for students, important instructional knowledge of content and pedagogy, and effective use of the CFC model to support teachers as they work to engage students in rigorous literacy experiences. Since 2014 Dena also researches the CFC as a remote coaching model.

Dena's experience in schools and districts is diverse. She has worked on the Navajo Reservation and helped to begin a charter school. She has taught first grade and adolescents in incarceration. She has worked with students placed in general education, special education, EL classrooms, and reading assistance – and believes that all students deserve differentiation as individuals with the capacity to learn.

This is a new workshop, which is offered for the cancelled workshop of Adam Lefstein ("Pedagogically Productive Talk among Teachers: Operationalizing and Critiquing an Emergent Theoretical Framework", see [p.54](#)). More information will be given on-site.

Workshop Session II

E) The impact of interactive dialogue on students' learning of mathematical reasoning

Prof. Dr. Robbert Smit¹, Prof. Dr. Kurt Hess², Alexandra Taras¹, Patricia Bachmann¹ & Heidi Dober²

1: St. Gallen University of Teacher Education, Switzerland; 2: University of Teacher Education Zug, Switzerland



Tuesday, September 6th, 2.00 pm, Sala Pioda

Interactive dialogue is essential for developing school students' mathematical reasoning competence. Mathematical reasoning is a special kind of discussion or dialogue, the goal of which is to determine the truth of mathematical statements. Productively supporting students during the process of mathematical reasoning is a challenge for the teachers; there needs to be a careful balance between autonomous pupil progress and teacher feedback and scaffolding.

Our goal was to empirically expand our understanding of the nature of the associations between observed interactive dialogue, teachers' formative feedback practices and students' mathematical reasoning competence. We applied a two-step approach in first constructing a video-analysis instrument for assessing the quality of the observed interactive-dialogue in the classroom and second combining the obtained interaction values with student and teacher questionnaire data from 1261 students in 71 5th and 6th grade primary classes.

Based on a rating system with 13 items we found that most teachers showed typical skills that are part of an effective interaction dialogue (Chi et al., 2001). Among the typical skills were *initiating dialogues with open questions*, which are also about assessing the student's level of progress. Further moves were *scaffolding that invites the students to continue their line of thinking* along with *feedback* which is used with restraint. Less frequent were *students formulating their needs* and where exactly they needed help. Mostly areas of improvement were identified by the teacher. Deeper questions from the teachers asking students to reason, justify, analyze, and evaluate their procedures occurred also not very often.

The interactive dialogue data derived from the rating process was Rasch analysed, and we related the achieved values of interaction quality to students' reasoning competence mediated by formative feedback, self-regulation skills and self-efficacy beliefs with multilevel analyses. Results on the student level showed that a student's individual perception of formative assessment practice predicted mathematical reasoning competence mediated via self-regulation skills and self-efficacy beliefs. Results on the class level showed that classes with high self-efficacy beliefs appeared to be classes where high interactive dialogue was observed, and formative feedback practice is frequent. It seems that explaining skills as part of mathematical reasoning was nourished by the discussions with others, especially the teacher, as student-student interaction was rarely observed in the sequences of interactive dialogue.

In the workshop, the categories of the rating manual will be discussed in terms of their difficulty and frequency. For this purpose, excerpts from the video material will be shown and related to the rating categories. The aims are, for example, the question of the completeness of the categories, the fit between the category and the video material or the validity of the difficulties in terms of content. Fundamentally, however, there is also the question of what can be achieved by teachers at all with reference to theoretical ideas of the quality of interactive dialogue.

Workshop Session II

F) Productive talk in post-lesson conferences with preservice teachers: Theoretical criteria as a tool to enhance learning

Dr. Diemut Ophardt, Dr. Christiane Buchholtz, Christine Ladehoff, PD Dr. Jan Pfetsch
Carolin Lohse (not attending)
Technische Universität Berlin, Germany

Tuesday, September 6th, 2.00 pm, **Sala Balint (NEW ROOM)**



Productive talk in post-lesson conferences of teacher education programs requires a carefully composed set of discourse phases and talk moves tuned to cognitive, motivational and emotional processing on the part of preservice teachers. Considering the widespread implementation of post-lesson conferences as a structural element of German teacher education it is highly relevant to provide concepts which both meet the state of research concerning productive talk and feasibility in the complex context of school practice. Whether and how theoretical knowledge should be applied here in a productive way is a controversial issue. Due to the difficulties of linking theoretical knowledge to practical competence and performance, the appropriateness of theoretical concepts in lesson conferences is thus highly questioned. However, incorporating specific and relevant theoretical aspects in an adaptive way in the reflection of preservice teacher's teaching may bear the chance for enhancing sustainable learning.

The workshop introduces a concept which aims at a focused and well-defined connection of particular teaching practices to theoretical criteria. We consider this connection as one crucial element of productive talk in post-lesson conferences. The workshop invites teacher educators (university, school and induction phase) as well as researchers to explore and discuss the 'criteria tool', which is based on the generic model of three dimensions of teaching quality. Productive talk is being promoted by relating subjective reasoning on success or failure of an instructional situation to higher order principles using the criteria tool. The comprehensive concept contains a set of additional tools developed and tested in teacher education at Technische Universität Berlin in the DiBeLe project of „Qualitäts offensive Lehrerbildung“. Based on a three-year experimental phase and continuing improvement of the concept we actually discuss further adaptations of the approach before entering the phase of dissemination.

During the workshop, transcripts from post-lesson conference sessions will be discussed. Using a case scenario, the opportunity to experience the criteria tool put to practice, will be provided. The aim of the workshop is to discuss to what extent the dialogic use of the tool may contribute to productive talk. Based on their expertise in the field, and the workshop experience, the participants are invited to bring in questions. Suggestions will be elicited to enhance the further development of the concept.

Small Group Work

G) Teaching productive talk with digital tools / A virtual-reality scenario

Dr. Eva Susann Becker, Prof. Dr. Dominik Petko
University of Zurich, Switzerland

Thursday, September 8th, 2.00 pm, Auditorium
(then group-work in Sala Eranos, Sala Pioda,
Sala Balint and Sala Mandala)



Information and communication technology (ICT) may help to bridge the gap between theory and practice, for example via virtual internships or simulations of actual classroom situations. The use of videos has been researched extensively with regard to teaching productive talk. However, there are still many open questions regarding the use of digital tools in virtual or mixed reality scenarios. In this rather open small group session, we aim to transfer our (new) knowledge on learning discourse to create scenarios and instructions for teacher trainings that use digital tools in virtual or mixed reality scenarios to foster productive talk in classroom discussions and/or coaching and mentoring situations.

Group 1 works with a real-time avatar-based simulation in which a simulation specialist is needed to direct the avatars. The software (e.g., «Mursion») syncs nonverbal communication and uses voice morphing to enhance a high level of authenticity while reducing cognitive load. However: Who are these simulation specialists and on what grounds do they direct the avatars and provide feedback? The group reviews an article on mixed reality simulations (MRS) and is given some video examples. Afterwards they discuss applicability for teaching productive talk with MRS and collect the main points and instructions for simulation specialists from a research perspective.

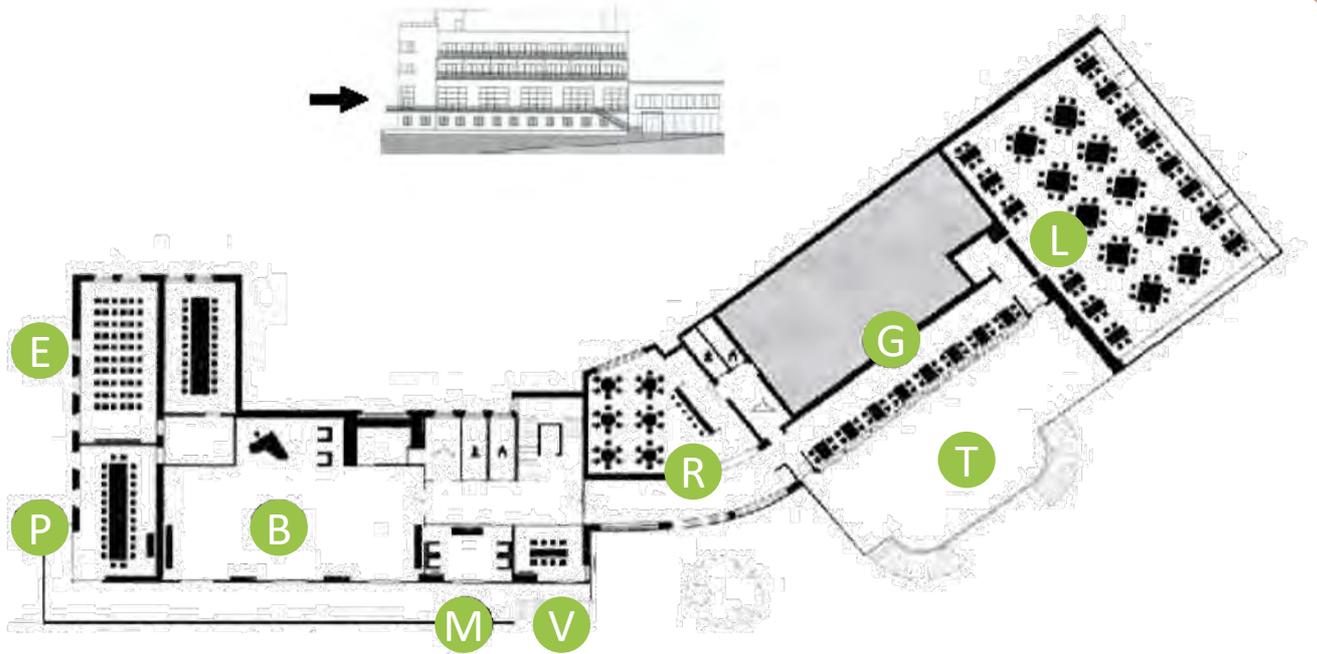


Source: Murphy, K., Cook, A., & Fallon, L. (2021).
Mixed reality simulations for social-emotional
learning. *Phi Delta Kappan*, 102.
<https://doi.org/10.1177/0031721721998152>

Group 2 views different 360-degree videos to simulate realistic classroom situations. The group discusses the applicability (and differences to “regular” video examples) for teaching productive talk and creates a script for a “good example” of productive classroom talk. Which teacher behaviors and talk moves are shown? What do the pupils do? The group plans different interactive sequences to create a virtual reality scenario that can be used to give (prospective) teachers a vivid experience of productive learning discourse.



Site Map



Our workshop rooms on the first floor (Bauhaus Building) can be used throughout the conference for formal and informal exchanges or if you wish to work individually.

- Sala Balint (B)
- Sala Eranos (E)
- Sala Pioda (P)
- Sala Mandala (M) & Sala von der Heydt (V)

Coffee Breaks (10:20-10:50am and 4.00-4.30pm) are at Spazia Roccia (R) and Lunch (12.30pm for 60-90 minutes) and Dinner at Sala Luce (L). You can use the Terrace (T) for breakfast and for coffee breaks.



If you have any questions or uncertainties, you can always contact the organization team on-site or write us an email adld-conference@ife.uzh.ch

Poster Session 1 includes eight posters from emerging and experienced researchers focusing primarily on classroom discourse. Each poster is firstly introduced in a 2-minute-presentation (Auditorium). We then move to the Sala Balint where participants have the opportunity to discuss the posters directly with the author(s).

Poster Session 1.1

Sparking change: How, why and under what conditions does professional dialogue generate shifts in teaching practice

Ms. Gabrielle Arengé
University of Cambridge, United Kingdom

Tuesday, September 6th,
4.30 – 4.45 pm Poster Slam, Auditorium / 4.55 – 6.00 pm, Sala Balint



Professional learning has been found to flourish when teachers engage in professional dialogues, reflect on their pedagogic practice, and notice or give thoughtful attention to student learning needs and capabilities (Rainio & Hofmann, 2021; Lefstein, Vedder-Weiss & Segal, 2020; Haßler et al, 2015; Penlington, 2008). However, these mechanisms alone or in combination are not always sufficient to catalyse change in teachers' classroom practice (Girardet, 2018; Hennessy, Haßler & Hofmann, 2016), especially in areas like southern Africa where dialogic and reflective norms within one's education and workplace are uncommon (Koosimile & Suping, 2011; Akyeampong, 2002). This raises a critical question: what else is needed to ensure teacher learning translates into shifts in enacted pedagogic practice?

This doctoral research investigates the supportive environments and contextual mechanisms that work with professional dialogue, reflection and noticing to facilitate shifts in teaching practice. The research focuses on professional learning interventions and pedagogic change efforts in Southern Africa.

Using a phased, iterative investigation, the project employs a novel combination of critical realist synthesis of existing qualitative research from Southern Africa and 'live' data from interviews and focus group discussions in Botswana to trace the phenomenon across time, geography, and data sources. Guided by Hofmann's (2020) dialogic analysis methods, the research maps and compares the process of teacher learning and shifts in practice in 19 pedagogic change efforts. The poster presentation shares preliminary explanatory insights.

In subsequent phases of the research, the literature-based synthesis is complemented with localized data generated from Botswana, where the Ministry of Basic Education is currently supporting the national scale-up of a pedagogic intervention, Teaching at the Right Level (TaRL). Pioneered in India, and now operating in over 15 countries across the global south, TaRL is a global south-south pedagogic approach that supports teachers to engage in professional dialogue, reflect on their practice, and notice students' learning needs and capabilities to shift teacher-focused pedagogies to learner- and learning-focused pedagogies. TaRL therefore functions as a unique comparative case, with potential to inform change efforts at wide scale. As a whole, the research offers an empirically based understanding of the early processes of pedagogic change in Southern Africa with specific insight on the role of professional dialogues when shifting teachers' practices.

Poster Session 1.2

Comparing the quality of video-based discussions in teacher communities when analyzing peer vs other videos

Dr. Miriam Babichenko

Ben Gurion University of the Negev, Israel

Tuesday, September 6th,

4.30 – 4.45 pm Poster Slam, Auditorium / 4.55 – 6.00 pm, Sala Balint



Collaborative analysis of classroom videos have become an integral part of many teacher professional development (PD) programs. Video recordings provide an exceptionally rich and detailed representation of classroom interaction, offering teachers with a unique opportunity to collaboratively explore and interpret teaching and learning processes as they unfold in reality and consider the implications of these observations to their own teaching practice. In this study, I employed quasi-experimental research to compare the qualities of teacher team discussions when they analyze video-clips of team members (Peer Video, PV) or videoclips of unknown teachers (Other Video, OV). Based on previous research, I define high-quality, video-based conversation as characterized by (a) noticing the details of the video; (b) noticing of students' thinking and behaviors and the way they are shaped by teachers' actions; (c) interpretative stance towards the video; (d) joint sensemaking of the video; (e) rethinking own practice based on insights from the video. The data for the study was collected in the context of a large-scale, intervention program aimed to foster pedagogical discourse in school-based, teacher-led, teacher teams. The leading teachers participated in a PD in which they were introduced to tools to facilitate productive pedagogical discourse, such as collaborative video-analysis. The intervention team helped with recording and editing PV clips and established an online video library of video-clips, that could be used by LTs as OV. The data for the current study included 28 audio-recorded, fully transcribed, video-based discussions (14 PV and 14 OV) collected in 28 teacher teams, during the years 2014-2018. Whole video-based discussions (ranging in length between 9 and 60 minutes) were fully transcribed, segmented into units of analysis and coded using two complementary coding schemes: the Noticing Coding Scheme (assessing what do the teams notice, how do they notice and joint sense making of the video) and the Time Use Coding Scheme (assessing the way the video-based discussion time was used by the teams). The findings show that despite expectations for differences, PV and OV, result in roughly similar teacher team discussions on most of the parameters explored here. The main difference between these two types of videos is in the way teachers evaluate PV and OV. PV discussions included significantly more positive evaluations than OV discussions, while OV discussions included significantly more negative evaluations than PV discussions. However, the role this difference play (if at all) regarding the dialogue's productivity has to be further explored. In addition, the findings show a tendency in OV-based discussions to focus predominantly on the video-taped teacher and her actions missing opportunities to explore the reciprocal relation between teaching and student learning, and thus not fully exploiting the potential of classroom video analysis.

Poster Session 1.3

An intervention study on teachers' discourse practice and its effects on classroom learning and student motivation

Dr. Ricardo Böheim¹, Dr. Ann-Kathrin Schindler², Prof. Dr. Alexander Gröschner³
& Prof. Dr. Tina Seidel¹

1: Technical University of Munich, Germany; 2: University of Augsburg, Germany

Tuesday, September 6th,

4.30 – 4.45 pm Poster Slam, Auditorium / 4.55 – 6.00 pm, Sala Balint



Research suggests that the nature of classroom discourse has a substantial influence on how and what students learn. In dialogic discourse, students are seen as active learners who collaboratively construct knowledge through the open exchange of different ideas and perspectives. However, in mainstream classrooms dialogic discourse is the exception rather than the rule. Classroom discourse is usually dominated by the teacher who steers students' attention in a prespecified direction. To help teachers shift their discourse practice from recitation towards dialogic discourse, we designed a one-year professional development program. In this program teachers learned about the role of open questioning techniques and productive talk moves through which teachers can facilitate dialogic discourse. In addition, the program offered several opportunities for reflection and co-inquiry of classroom discourse among participating teachers. Nineteen teachers and their 450 high-school students participated in this study. The extent to which teachers changed their discourse practice was tracked via ratings of classroom video. Video ratings revealed that teachers varied in their discourse practice when entering the program and while some teachers showed substantial changes in their discourse practice other teachers did not show any change. Evaluation results suggest that students whose teachers changed their discourse practice toward a more dialogic pedagogy had high changes in their perceived activation during classroom discourse. Moreover, longitudinal multilevel modeling revealed that students perceived stronger increases in their cognitive engagement and motivation (autonomy and competence support) in classrooms wherein teachers showed strong changes in their discourse practice. The study highlights that PD is a powerful tool to foster change in teachers' discourse practice and that changes in discourse practice are related to changes in students' learning perceptions. Moreover, the study demonstrates that video ratings of teachers' discourse practice provide a comprehensive rationale of whether or not to expect changes in student outcomes.

Poster Session 1.4

Cultivating teachers' contingent responsiveness in dialogic science discussions: A design-based approach

Ms. Lydia Cao
University of Cambridge, United Kingdom



Tuesday, September 6th,
4.30 – 4.45 pm Poster Slam, Auditorium / 4.55 – 6.00 pm, Sala Balint

Orchestrating productive dialogic discussions in a classroom is challenging – it is not only technical (making use of a variety of techniques such as talk moves), but also intellectual (engaging in collective sense-making with students), and improvisational (being able to respond to the dynamic flow of student talk on the fly). The skill to contingently respond to student ideas to promote equitable collective sense-making is defined as "contingent responsiveness" (Cao, 2021). This research used a design-based research approach and emerging technology (i.e., mixed-reality simulations) to: 1) co-design an effective professional development (PD) program with the school to support teachers to cultivate contingent responsiveness. 2) understand how the design features work together to foster contingent responsiveness. The PD design embodied the improvisational, technical, and intellectual nature of contingent responsiveness (Cao, 2021). The PD program had two components: 1) Four collaborative workshops, where teachers engaged in collaborative inquiry, collective reflections and guided inquiry to develop conceptual understanding of dialogic science teaching and learn about various talk moves (Michaels & O'Connor, 2012). 2) Four simulation sessions, in which teachers put into action their learning from the workshops by orchestrating a science discussion in a virtual classroom with avatar students, just as a pilot learns to fly a plane in a simulator (Dieker et al., 2013). This research took place in a democratic school in Islamabad, Pakistan. Due to the pandemic, the study was conducted remotely. Six headteachers participated in the co-design and refinement of the workshops. Ten teachers participated in the PD and provided feedback throughout the four design cycles. This research project is now at the analysis phase. A combination of analysis methods (including sociocultural discourse analysis, content analysis, epistemic network analysis, and interaction analysis) was used to evaluate the effectiveness of the PD and uncover the mechanism of how teachers develop contingent responsiveness in relation to the design features. Preliminary findings indicate that teachers became substantially more dialogic in their approach to science discussions over the course of four simulations, with increasing levels of contingent responsiveness evident. More details will be available at the time of the conference.

Poster Session 1.5

Student-teachers' uncertainty as a learning opportunity in mentoring conversations

MSc Oana Costache, Dr. Eva S. Becker & Prof. Dr. Fritz Staub
University of Zurich, Switzerland

Tuesday, September 6th,
4.30 – 4.45 pm Poster Slam, Auditorium / 4.55 – 6.00 pm, Sala Balint



As student teachers enter the teaching phase of their teacher education program, they are confronted with a lot of uncertainties, such as choosing between instructional designs, deciding on the content of a lesson that needs to be adapted to students' knowledge and abilities, and trying to implement their plans while keeping control of the classroom. How students learn to navigate this uncertain context remains unclear. Therefore, this study examines what uncertainties student teachers encounter during lesson planning in pre-lesson conferences and which cooperating teacher responses to these uncertainties may be related to student teachers' learning gains in instructional competence. Transcripts and video-data from 32 pre-lesson conferences of 14 cooperating teacher-student teacher dyads are examined using a linguistic approach to capture student teacher uncertainty. Cooperating teachers' responses to student uncertainty are then explored in terms of their communicative style and in relation to student teachers' instructional quality (as reported by the student teachers and their pupils). The study illustrates the potential of using uncertainty as a learning opportunity in mentoring conversations and suggests new possibilities for teacher training programs.

Poster Session 1.6

Learning processes during teaching practice as activity in social networks – an interdisciplinary study

Prof. Dr. Annelies Kreis¹, Prof. Dr. Esther Brunner², Dr. Marco Galle³, Sanja Stankovic² & Sonja Hiebler³

1: University of Teacher Education Lucerne, Switzerland; 2: Thurgau University of Teacher Education, Switzerland; 3: Zurich University of Teacher Education, Switzerland

Tuesday, September 6th, 4.30 – 4.45 pm Poster Slam, Auditorium / 4.55 – 6.00 pm, Sala Balint



In Switzerland, and increasingly as well in Germany, practica play an important role in teacher education. This is reflected in the temporal scope and amount of school-based training in teacher education programs. Practica thus are a pivotal and resource intensive part of teacher education, and should be coherently related to the university-based elements.

During practica, students are supported by mentor teachers, who thus are highly relevant for teacher training. In Swiss TE programs, student teachers are in addition supported by university-based mentors during practica. In some programs there is even more specific support provided by subject-specific university-based mentors. However, there is a lack of knowledge about differences between characteristics and outcomes of lesson dialogues of student teachers with educators who have different roles and expertise.

This poster informs about the research project "Learning processes during teaching practice as activity in social networks—an interdisciplinary analysis from a general and mathematics education perspective". The project is funded by SNF (duration 07/2021-06/2025) and examines the social networks at practice school level and nested learning opportunities that emerge during collaborative activities of student teachers with mentor teachers, peers and with university-based mentors for general respectively mathematics education. Thus, this study aims to shed light on the role and significance of different actor groups of school-based teacher education for the development of professional competences of student teachers. We follow an interdisciplinary approach which integrates a general pedagogical and a pedagogical content specific perspective for teaching mathematics. Research activities are conducted in the context of a teacher training program for primary schools at two Swiss universities of teacher education (PH Zurich, PH Thurgau). The mixed-methods design of the study involves questionnaires, qualitative social network analyses, and video-recordings of lesson dialogues. Data is collected in relation to a 4-week practicum with two successive cohorts (spring 22/23). We examine with which different actors student teachers plan and reflect their teaching experiences in lesson dialogues, which topics they work on in this context, how collaborative their interactions are and to which outcomes this leads. The poster presentation will explain the theoretical background, the research design and methods of this interdisciplinary study with an emphasis on the examination of lesson dialogues in different actor constellations.

Poster Session 1.7

How do PD programs on comparing solution methods and classroom discourse affect students' achievement in mathematics?

Dr. Sog Yee Mok¹, lic. phil. Christian Hämmerle¹, PD Dr. Christian Rüede² & Prof. Dr. Fritz C. Staub¹

1: University of Zurich, Switzerland; 2: University of Applied Sciences and Arts Northwestern Switzerland

Tuesday, September 6th, 4.30 – 4.45 pm Poster Slam, Auditorium / 4.55 – 6.00 pm, Sala Balint



Comparing solution methods can foster strategy flexibility in equation solving. Productive classroom discourse such as Accountable Talk (AT) orchestrated by teachers can improve students' justifications during classroom discussions and student achievement. Do students' subject matter justifications during classroom discourse mediate the effect of teachers' professional development programs (PDs) focused on comparing and AT on students' mathematics achievement?

We investigated whether two PDs (i.e., comparing or comparing + AT) compared to a control group increased the number of student justifications, and whether this affected mathematics achievement (i.e., strategy flexibility, procedural knowledge, and conceptual knowledge). The study (N = 739 9th and 10th grade students in 39 classes) had an experimental pre-post control group design. The results of our multilevel path models showed significant mediation effects in the comparing + AT group on procedural and conceptual knowledge, but not on strategy flexibility. No mediation effects were found in the comparing group.

Poster Session 1.8

Prototypical educational settings from special education teachers in inclusive classes – a video analysis

Dr. Jeannette Wick
University of Zurich, Switzerland

Tuesday, September 6th,
4.30 – 4.45 pm Poster Slam, Auditorium / 4.55 – 6.00 pm, Sala Balint



Following the Salamanca Statement of 1994, children with special needs are being increasingly taught in inclusive classes. This results in additional pedagogical personnel who compliment the work of regular teachers. Empirical research on educational activities by special education teachers in inclusive settings is scarce (e.g., Moser, 2013). This contribution is part of a descriptive multi-method study which meets this need for research and aims at describing activities and role perceptions of special education teachers and regular teachers in inclusive primary schools in Switzerland. 36 videotaped and transcribed recordings of educational settings in inclusive teaching (primary school level), which have been described as prototypical by teachers of special education (N=30), are analysed with regard to their surface and deeper level structure. Firstly, five prototypes of educational settings could be identified: (1) group setting outside class, (2) group setting within class, (3) one-to-one setting outside class, (4) one-to-one setting within class and (5) mixed setting (combination of group respectively one-to-one setting outside and within class). The second step of analysis focused on group settings within and outside class and the mixed settings. For these a low-inference coding system was developed based on the coding system for scaffolding by van de Pol (2012, 2013) and the classroom-discourse model by Bak (1996) and applied to the analysis of them on a surface and on a deeper level structure. The analysis allows for statements about a) progression, b) scaffolding intentions, c) scaffolding means, and d) learner understanding during support. On the surface structure, a total of twelve teaching patterns could be identified across all proto-types. On a deeper level structure, learner support is provided predominantly in the cognitive domain and rarely in the emotional and metacognitive domains. Learners are supported by means of short answer questions and feedback with mere indications of the correctness of their answers, with indicates a close-knit conversational approach.

Poster Session 2 includes seven posters from emerging and experienced researchers focusing primarily on in-depth analyses of productive discourse (classroom discourse: Poster 2.3, 2.4, 2.6) and discourse in coaching and mentoring: Poster 2.1, 2.5) and tools to enable or support these analyses (Poster 2.2 and 2.7). This is the last session on Wednesday before our social event to Brissago Island.

Poster Session 2.1

Asymmetries in productive mentoring dialogues

Dr. Kathrin Futter¹ & Prof. Dr. Fritz Staub²

1: Schwyz University of Teacher Education, Switzerland;

2: University of Zurich, Switzerland



Wednesday, September 7th,
1.30 – 1.45 pm Poster Slam, Auditorium
1.55 – 2.30 pm, Sala Balint

In teacher education mentor teachers' dialogues with prospective teachers in school-based practica are considered to be pivotal (Darling-Hammond, 2014; Hobson et al. 2009). Based on a review of empirical literature on mentor teachers' behavior during dialogues with prospective teachers Hennissen et al. (2008) proposed the MERID-model (MEntor (teacher) Roles In Dialogues) to conceptualize the behavior of mentor teachers. It suggests mentoring dialogues to be analyzed with respect to two dimensions: (1) The extent to which the topics of the mentoring dialogue are introduced by the mentor teacher (active vs. reactive input). (2) The degree to which the mentor teacher steers the dialogue related to a particular topic (directive vs. non-directive). Based on the extent to which the introduction of topics and the directiveness of the dialogues addressing topics depart from a symmetric relationship between mentor and student the MERID-model stipulates four roles: Imperator, Advisor, Initiator and Encourager.

Our objective was to analyze dialogues of Swiss mentor teachers with mentees on the teaching of mathematics lessons at lower secondary schools based on the MERID-model. In addition, all dialogues have been analyzed with respect to evidence for teacher learning. Linking the analysis of key features of dialogues with an analysis of teacher learning outcome allows to address the following question: Do thematic units of analysis in mentoring dialogues with evidence for teacher learning differ from units without such evidence with respect to mentors' topic dominance and directiveness of addressing the topics?

Our sample consists of 21 mentor teachers in grades 7, 8 or 9, each assisting a student teacher. The results based on the MERID-model show that the mentoring dialogues in our sample were highly unbalanced in terms of topic control and directiveness of topic related dialogues with mentors in the dominant role of the imperator mostly. These asymmetries, however, turned out to be significantly lower for thematic units of analysis that include evidence for teacher learning, such as student teachers verbalizing specific intentions for change or higher order reflections. These differences suggest that the emergence of productive talk with student teachers is associated with mentoring dialogues in which the mentors' dominance in setting the topics and mentors' directiveness in addressing the topics are shifting to a less asymmetric state.

Poster Session 2.2

Measuring classroom dialogue from student perspectives: Validating the Dialogic Teaching Questionnaire (DTQ-S)

Prof. Dr. Alexander Gröschner¹ & Prof. Dr. Sara Hennessy²

Not attending: Mathias Dehne¹, Dr. Elisa Calcagni¹, Ruth Kershner²

1: Friedrich Schiller University Jena, Germany; 2: University of Cambridge, UK

Wednesday, September 7th,

1.30 – 1.45 pm Poster Slam, Auditorium / 1.55 – 2.30 pm, Sala Balint



Studies on classroom dialogue have mainly focused on the perspective of external observers or teachers with regard to classroom practices. Only a few instruments are available that capture student perceptions of dialogic teaching (Chen et al., 2020). The present study, therefore, addressed this issue by validating and analyzing the invariance of the newly developed Dialogic Teaching Questionnaire (DTQ-Student version) assessing student ratings of classroom dialogue (Gröschner et al., 2020). In total, 2,776 students were asked to fill-in the DTQ-S after a lesson taught by preservice teachers at the end of their teaching practicum. In a first step, a cross-validation approach was applied and exploratory (EFA) and confirmatory factor analyses (CFA) were sequentially estimated. The resulting three-dimensional structure of the DTQ (Openness, Students' Contributions, and Dialogic Participation) from the EFA was replicated in the CFA sample with a good model fit, whereas a bifactor model with general factor showed the best fit with the data. The final structural model comprises the factors Openness, Dialogic Participation, and the general factor as the s-1 method had to be applied. Furthermore, gender differences regarding the factors were found. The poster presents the DTQ-S as an easy-to-implement tool that can help teachers to assess their dialogic practices in relation to other observational instruments (Hennessy et al., 2020).

Poster Session 2.3

Fostering strategy flexibility with subject matter content in classroom discourse

lic. phil. Christian Hämmerle¹, Dr. Sog Yee Mok¹, PD Dr. Christian Rüede², Prof. Dr. Fritz Staub¹
1: University of Zurich, Switzerland; 2: University of Applied Sciences and Arts Northwestern Switzerland

Wednesday, September 7th,

1.30 – 1.45 pm Poster Slam, Auditorium / 1.55 – 2.30 pm, Sala Balint



Research on productive classroom discourse was able to demonstrate that the mode of communication positively affects student learning. It is surprising, however, that subject matter content analyses of classroom discourse have hardly been conducted. The presented work addresses this research gap on content-based classroom discourse analysis in the field of equation solving, as it is key for proficiency in high school mathematics. Strategy flexibility is fundamental in equation solving. In laboratory studies comparing multiple solution methods in equation solving showed positive effects on students' procedural, conceptual, and flexibility knowledge. But evidence from real classrooms is rare. Considering the importance of classroom discourse for student learning more knowledge on how to productively compare solution methods in classroom discourse is needed. The poster presents two linked studies. The first looks at the subject matter content expressed in classroom discourse. Planning, for example, is an important content for strategy flexibility in equation solving. The first study hypothesized that when multiple solution methods are compared, aspects of planning are discussed more often than when multiple solution methods are not compared. The second study's hypothesis was that students' gains in procedural, conceptual, and flexibility knowledge can be predicted based on the frequency of expressed types of content in the classroom discourse. The first study analyzed transcripts of 172 lessons from 43 classrooms in a unit on quadratic equations (9th and 10th grade). The qualitative content analysis refers to realized turns in these transcripts. The hypothesis is tested based on a binary logistic regression analysis across classes and on paired samples t-test at the class level. Both analyses show that turns on planning double if classes compare multiple solution methods. The second study asks if the frequency of types of subject matter content discussed correlate with students' learning gains after the unit on quadratic equations. First results showed that at the classroom level the number of utterances thematizing planning solution methods correlate significantly with procedural knowledge.

Poster Session 2.4

Opportunities to learn for flexibility in solving quadratic equations: Analysis of tasks posed in grammar schools

MA Maurus Küttel¹, PD Dr. Christian Rüede² & Prof. Dr. Fritz Staub³

1: University of Teacher Education Lucerne, Switzerland; 2: University of Applied Sciences and Arts Northwestern Switzerland; 3: University of Zurich, Switzerland

Wednesday, September 7th,

1.30 – 1.45 pm Poster Slam, Auditorium / 1.55 – 2.30 pm, Sala Balint



Flexible equation solving is an important prerequisite for a successful start of academic degree programs. Therefore, students at grammar schools need to learn different methods of solving an equation and to solve it in the most efficient way. But do students sufficiently deal with tasks in class that support the development of such crucial skills? As part of a series of contributions on flexible equation solving, we present a category system that allows the identification of opportunities to learn strategy flexibility. Characteristics of task core (mathematical subject matter) and task periphery (prompts) are analyzed. Characteristics of task cores indicate whether multiple solutions are possible due to the algebraic structure of an equation, while characteristics of task periphery indicate whether learners are asked to consider multiple solution methods or to compare different methods.

The sample analyzed is the control group of the project MathFlex that consist of 13 grammar school classes from German-speaking Switzerland. The analysis shows that in almost all classes, more than half of the tasks for solving quadratic equation can be solved more efficiently in at least one other way in addition to the solution-formula-based method. From this point of view, the equations are suitable for learning how to solve them flexibly. In almost all the classes examined, however, the proportion of tasks requiring multiple solutions is less than a quarter. Comparison tasks, for example, in which two worked-out solutions of an equations are placed side by side, have not been observed in the sample. However, empirical findings reveal that flexible equation solving can be supported with such comparative tasks. From this work can be concluded that for rule-based equation solving at grammar schools, more learning opportunities for multiple solution methods and for comparing solution methods could be offered to support the development of flexibility.

Poster Session 2.5

Effective mentoring dialogues: case studies of practicum dyads with varying learning outcome in lesson conferences

lic. phil. Sina Schatzmann, Dr. Eva Susann Becker & Prof. Dr. Fritz Staub
University of Zurich, Switzerland

Wednesday, September 7th,
1.30 – 1.45 pm Poster Slam, Auditorium / 1.55 – 2.30 pm, Sala Balint



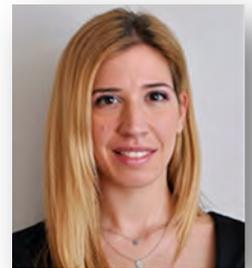
Lesson conferences make up a large part of the mentor teacher support during the teaching practicum and they are recognized as important learning opportunities for student teachers (e.g. Hascher, Cocard & Moser, 2004). Empirical results indicate that particularly co-constructive dialogues in a less directive style according to the MERID model (Hennissen, Crasborn, Brouwer, Korthagen and Bergen, 2008), in which student teachers are able to introduce their own topics more often, open up learning opportunities for student teachers (Futter, 2017). However, more needs to be known with respect to which specific dialogue moves and skills of mentor teachers regarding certain contents in lesson planning and reflection promote student teacher learning. Moreover, the effects of lesson conferences on student teachers' actual teaching behaviors in the respective lesson and pupils' learning outcome have to be studied in-depth. The aim of this dissertation project is therefore to identify effective mentoring dialogues in lesson conferences for students teachers' and pupils' learning in order to formulate recommendations for mentor teacher training and to generate hypotheses for further research. The project focuses on three main questions: 1) Which specific dialogue moves and skills of mentor teachers considering emotional support and instructional assistance promote student teacher learning in lesson conferences? 2) Which specific dialogue topics (e.g. learning difficulties of the pupils) promote student teacher learning in lesson conferences? 3) How does mentor teacher support in lesson conferences effect student teachers' teaching and pupils' learning outcomes in the respective lesson? Based on existing video data of a Swiss sample (Staub, Waldis, Futter & Schatzmann, 2014), multi case studies (Hancock & Algozine, 2017; Yin, 2018) of ten practicum dyads (mentor teacher; student teacher) with varying learning outcome in lesson conferences have been conducted. In a first step, the mentoring dialogues of the selected dyads were analyzed with the help of MAXQDA software for computer-assisted qualitative data analysis. An extensive coding scheme based on a deductive approach was developed to analyze a) the mentor teachers' specific dialogue moves and mentoring skills and b) the specific dialogue topics discussed. In a second step, results of the mentor teacher support in lesson conferences are linked to results of the video-recorded lessons held by the student teachers and to pupils' learning outcomes. The multi case studies will result in in-depth case descriptions and comparisons. The poster will present main findings and theses on what contributes to productive dialogues in lesson conferences that advance teacher learning.

Poster Session 2.6

A systematic analysis of teacher questioning practices

Dr. Maria Vrikki & Dr. Maria Evagorou
University of Nicosia, Cyprus

Wednesday, September 7th,
1.30 – 1.45 pm Poster Slam, Auditorium / 1.50 – 2.30 pm, Sala Balint



There is growing evidence associating productive forms of classroom dialogue and argumentation with increased student understanding and learning. Such productive forms involve students articulating their ideas, elaborating on them and justifying them using evidence. Despite this research, orchestrating dialogic and argumentative interactions is a challenging task for teachers, as suggested by the mixed findings reported by relevant professional development efforts. We argue that attention should be drawn to the quality of teacher questioning practices in order to improve the level of classroom dialogicality. Research has consistently shown that the triadic pattern of teachers' initiation, students' response and teachers' feedback is still dominant in classrooms. Helping teachers convert these patterns from authoritative to dialogic, therefore, is key for improving the quality of classroom dialogues.

Our study follows the lessons of 14 pre-primary and primary school teachers in Cyprus, who participated in the implementation of an innovative programme aiming to foster students' cultural literacy, that is their sense of tolerance, empathy and inclusion. Lessons at two different time points of the implementation were audiorecorded, transcribed and coded for the different types of questions posed by the teachers, using an innovative tool, the "Teacher Questioning Scheme". Findings suggest that, while there is great initial variation between lessons in terms of teachers' questioning practices, there is significant improvement over time. Teachers increased their use of follow-up questions, authentic questions and open questions, while they decreased their use of invitations to report facts. In addition, correlations between teachers' invitations to build on ideas and to predict/hypothesize/imagine and students' expansion and reasoning demonstrates the impact that teacher questioning practices can have. Important implications for teacher education and teacher professional development are drawn. Finally, the theoretical and methodological contributions of the study are discussed.

Poster Session 2.7

New perspectives for classroom observation and mentoring conversations with eye-tracking videos

Prof. Dr. Corinne Wyss¹, Prof. Dr. Katharina Rosenberger² & Dr. Sarah Forster-Heinzer³

Dr. Sara Mahler¹, Dr. Kerstin Bäuerlein¹ (not attending)

1: FHNW School of Education, Switzerland; 2: University College of Teacher Education Vienna/Krems, Austria;

3: University of Teacher Education Lucerne, Switzerland

Wednesday, September 7th,

1.30 – 1.45 pm Poster Slam, Auditorium / 1.50 – 2.30 pm, Sala Balint



Working with videotaped teaching sequences has become well established in teacher education worldwide over the last fifteen years. In contrast to on-site classroom observations, video recordings offer the opportunity to gain distance from classroom events and to examine aspects of teaching and learning in more depth, as well as to observe and review complex activities from different perspectives. In addition to individualized analysis and reflection, videos also offer the opportunity to engage with fellow students, mentors, practice teachers, or university lecturers about one's own or another person's teaching. To date, teaching sequences are mainly recorded from the "observer's perspective", mostly the student's perspective. However, thanks to new technological developments, it has become possible to record classroom teaching from the teacher's eyes, with so called eye-tracking devices. Such recordings reveal where the teacher is looking and what or whom he or she is focusing on and for how long, or what is being neglected in the teaching situation. For teacher education, this opens up new perspectives for observation and reflection of classroom practices. In a project (2020-2022) of the FHNW School of Education, which is funded by the Stiftung FHNW, lessons of around 15 teachers are being recorded with conventional digital cameras showing the observer's perspective as well as with eye-tracking cameras showing the teacher's view. The recordings are made available on a video portal for educational purposes. Building on this, a follow-up project (2021-2022), funded by the Lehrfonds FHNW, investigates by means of structured interviews what pre-service (N=32) and in-service (N=20) teachers perceive while watching the teaching videos from the different perspectives, and how they interpret and evaluate what they observe. In the conference presentation, conceptual considerations as well as results of the interview survey are presented and discussed in relation to the possibilities and challenges for teacher education.



Social Event

Trip to Brissago Island

The Brissago Islands date back to the Roman time (vestiges of that time have been found on the islands) but became particularly famous thanks to the fascinating Russian Baroness Antoinette de Saint Léger who owned the Islands (1885-1927) and launched rich cultural activities. At the same time, she started what has become a unique botanical garden in Switzerland (today the property of the Canton Ticino), with 1500 plant species both indigenous and from sub-tropical zones. It takes one hour to visit the botanical garden.

Program (times subject to small modifications)

- 3.00 pm Departure on foot from Monte Verità
- 3.40 pm Departure by boat (port in Ascona)
- 4.00 pm Arrival at Brissago Islands and guided visit of the botanical garden
- 5.10 pm Free time at your disposal
- 6.15 pm Dinner
- 9.00 pm Departure from the Islands by private boat
- 9.15 pm Arrival at Crodolo-Porto Ronco
- 9.20 pm Transfer to Monte Verità by minibus
- 9.30 pm ~ Arrival at Monte Verità

Poster Session 3 includes eight posters from emerging and experienced researchers focusing on **digital tools** (Poster 3.1, 3.3., 3.4, 3.7) when studying productive talk in different settings. A second focus of this session is on classroom talk in mathematic classes (Poster 3.4, 3.5, 3.6). Finally, Poster 3.2 reports insights from Research Lesson Study and poster 3.8 on examining talk moves (revoicing) in quantitative research designs.

Poster Session 3.1

The influence of teachers' knowledge and beliefs on interactive learning activities supported by technology use

Ms. Chiara Antonietti¹, Ms. Maria-Luisa Schmitz¹, Ms. Tessa Consoli¹, Prof. Dr. Philipp Gonon¹, Prof. Dr. Dominik Petko¹ & Prof. Dr. Alberto Cattaneo²

1: University of Zurich, Switzerland; 2: Swiss Federal University for Vocational Education and Training, Switzerland

Thursday, September 8th,
4.30 – 4.45 pm Poster Slam, Auditorium /
4.55 – 6.00 pm, Sala Balint



The effectiveness of technology integration in teaching and learning depends on how digital tools are integrated in different learning activities. According to the Interactive, Constructive, Active, and Passive (ICAP) theoretical framework, the cognitive processes of knowledge acquisition become increasingly elaborated from passive to interactive learning activities, however the use of technology to support these latter activities where students collaboratively discuss their argumentations and interact each other with the aim of building new knowledge is low frequently reported by teachers and students. Thus, we aim to understand what factors might enhance the integration of technology to support interactive activities. Based on previous literature on the enablers of technology integration, we hypothesized that the teachers' Technological Pedagogical Content Knowledge (TPCK) and positive beliefs about the usefulness of technology are positively related to the implementation of interactive learning activities supported by technology use. To test our hypothesis, we collected data through an online survey completed by 1059 teachers of upper-secondary schools in the Canton of Zurich, Switzerland. As teachers were nested within different schools, we conducted multilevel linear modelling analysis to investigate the relationship between teachers' TPCK, beliefs and technology integration into interactive learning activities. Results confirmed our hypothesis and revealed that teachers' TPCK and positive beliefs toward technology well explain the technology use for these type of learning activities. Moreover, we found that teachers from vocational schools implemented interactive activities supported by technology use more often than gymnasium teachers, suggesting that the integration of technology into learning activities may depend on the subject matter taught by teachers. Further descriptive statistical analyses revealed that professional subject teachers integrated technology in interactive learning activities more frequently than other teachers. The implementation of technology-supported interactive learning activities may also depend on the teaching curriculum as well as teachers' knowledge and beliefs.

Poster Session 3.2

The impact of Research Lesson Study on teachers' beliefs about and educational practices for high-ability students

Dr. Katelijne Barbier, Prof. Dr. Elke Struyf & Prof. Dr. Vincent Donche
University of Antwerp, Belgium



Thursday, September 8th,
4.30 – 4.45 pm Poster Slam, Auditorium / 4.55 – 6.00 pm, Sala Balint

The current study aims to gain insight into how teachers' beliefs and educational practices regarding high-ability students change when they participate in Research Lesson Study (RLS). RLS is a highly specified form of classroom action research focusing on the development of learning, teaching and curriculum. Teachers solve teaching problems together using exploratory talk. Exploratory talk is a specific type of collaborative discussion that allows teachers to think together aloud, so that others can hear, explore and build-on partly-formed ideas. In addition, RLS tend to stimulate meaning-oriented learning. This type of learning prompts teachers not only to learn "what works", but "why and how things work" too. This is a high-quality, deep mode of teacher learning. Thirteen teachers from six different mixed-ability elementary and secondary schools participated in repeated in-depth interviews. We were able to capture teachers' learning gains during RLS and see whether and how these gains lead to changes in their beliefs and educational practices. The learning gains confirmed many of the former evidence-based findings regarding fostering high-ability (HA) students, which are highly relevant for teachers. Furthermore, teachers with limited prior beliefs, knowledge, and teaching skills tend to learn less than other teachers. They might need more time or a more directed way of professionalization. These are significant findings for teachers. By further optimizing teachers' beliefs about high-ability students and their educational practices through RLS, effective education for high-ability students can be obtained.

Poster Session 3.3

Ask the students! Development of a school student feedback tool for post-lesson conferences in teacher education

Ms. Christine Ladehoff, PD Dr. Jan Pfetsch, Dr. Diemut Ophardt, Dr. Christiane Buchholtz & Ms. Carolin Lohse, Technische Universität Berlin, Germany

Thursday, September 8th,
4.30 – 4.45 pm Poster Slam, Auditorium 4.55 – 6.00 pm, Sala Balint



Post-lesson conferences often rely on lesson observation by the university supervisors. However, feedback from school students on the lesson could add a significant additional perspective. With all perspectives on the lesson referring to the same dimensions of teaching quality, the feedback to teacher training students would be more coherent and helpful for learning.

Based on three basic dimensions of teaching quality: supporting knowledge acquisition, motivating, and classroom management (Gärtner et al., 2021), the project „Digitalisierung im Beruflichen Lehramtsstudium“ developed a short feedback scale for school students. An item pool was developed, and pilot tested. Afterwards, a reduced set of items was implemented in the practical semester. The university supervisors visit one or two lessons, given by the teacher training students. In the post-lesson conference, both reflect on the strengths and weaknesses of the lesson. For this post-lesson conference, we developed a comprehensive concept (UntAdFoKo concept). Among others, the ‘feedback tool’ enables short feedback to be completed by school students right after the lesson (to be implemented as a digital app for smartphones in a later step).

The pilot testing is based on quantitative data from the pilot study with $N = 77$ school students. Results showed that the subscales had acceptable to good reliabilities. Item characteristics showed rather high means, medium to high factor loadings, medium to high item difficulties, and rather high item-total correlations. Based on these indicators, a short scale on teaching quality with 15 items was built and tested in the practical semester 2021/2022.

Results from the feedback tool were implemented into the post-lesson conferences as external feedback complementary to the internal feedback of the teacher training student and external feedback of the university supervisor (cf. Narciss, 2014). How this implementation was perceived, was analyzed based on qualitative data from 4 focus group discussions with $N = 17$ teacher training students. First analyses suggest that the results from the different perspectives differed often. The results had a surprising and motivating effect on some participants. Especially when the learners’ perception differs significantly from the internal feedback or was perceived as “too good”, they questioned the validity of the feedback tool. Additionally, university supervisors generally focused on the most and less pronounced means of items. Teacher training students found it helpful how university supervisors commented on the results of the feedback tool to enable a deeper understanding of the learner’s view. The results point at the utility of a feedback tool for school students on the teaching quality. However, pure data does not speak for itself, but is more helpful when it is interpreted together with a teaching expert. Feedback about a lesson has the potential to support productive learning of teacher training students.

Poster Session 3.4

Engaging Chinese students in blended dialogue mediated by online interactive platforms in primary mathematics classrooms

Ms. Qian Liu
University of Cambridge, United Kingdom



Thursday, September 8th,
4.30 – 4.45 pm Poster Slam, Auditorium / 4.55 – 6.00 pm, Sala Balint

From the socio-cultural perspective, the potential of educational dialogue in improving students' attainment and higher order thinking in mathematics has been increasingly evidenced. High student participation in dialogue has been argued to play a key role in productive dialogue. Given a range of affordances for learning, digital technologies have the potential to create a dialogic space where multiple perspectives can be openly shared, critically, and creatively linked and synthesized and new meaning collectively constructed. How the perceived potentials can be realized through appropriate pedagogical approaches and teaching strategies in practice still needs exploration and empirical evidence. The research focusing on the role of an online interactive platform in enhancing students' participation in blended dialogue is also rare. This poster presents the study conducted in two primary schools in China, focusing on high student participation in dialogue mediated by the use of two online interactive platforms on tablets in mathematics classrooms. Drawing on seven Chinese teachers' 14 lessons and their individual interviews, the study aims to investigate what affordances of the online interactive platforms were enacted and explored how they were enacted by the teachers to support student participation in a hybrid of online and offline dialogic environment. It was found that the enacted affordances for active dialogic participation included connectivity, visibility, multimodality, provisionality, interactivity and responsivity, selection, focusing, grouping, linking, labelling, and revisitation. In addition, six essentials in the emerging technology-integrated pedagogy for dialogic participation were highlighted: classroom ethos, task design, participation structures, online dialogic interaction, face-to-face talk, and transitions and connections. This study argues that online interactive platforms can facilitate students' active, critical, and sustained participation in blended dialogue with the appropriate dialogic approaches to teaching and teachers' dialogic intention. It contributes to the growing but still limited body of research on digital technology and dialogue, and it carries practical implications for the pedagogical exploration combined with digital platforms in mathematics education.

Poster Session 3.5

Classroom talk as a complex dynamic system: Depicting dialogue in State Space Grids

MSc Benjamin Roth¹, Prof. Dr. Fritz Staub¹ & PD Dr. Christian Ruede²

1: University of Zurich, Switzerland; 2: University of Applied Sciences and Arts Northwestern Switzerland

Thursday, September 8th,

4.30 – 4.45 pm Poster Slam, Auditorium / 4.55 – 6.00 pm, Sala Balint



Classroom talk takes up a substantial amount of time and can be beneficial in many ways. Nevertheless, establishing productive discourse in the classroom is a challenging task with many aspects to consider. Students should contribute to the talk, listen to one another, deepen their reasoning, and engage with the ideas of others. Teachers use questions, elicitations, and wait-time to cultivate classroom talk that contribute towards reaching these goals in student participation.

The aim of this study is to develop and explore a new way of looking at classroom talk and the challenges a teacher (or students) may encounter when productive talk is implemented in the classroom. For this purpose, classroom talk is viewed as a complex dynamic system in which the teacher and the pupils in the class are viewed as coupled system parts. The interaction of these parts over time will be depicted in a state space grid that contains possible states the classroom talk can be in. Using this kind of representation, teacher and student behavior, interactional patterns and their change over time can be made accessible for quantitative and qualitative analysis.

Poster Session 3.6

Knowledge construction in teacher-led small groups: A qualitative process analysis on solving mathematical word problems

Ms. Iris Tanner¹, Prof. em. Dr. Kurt Reusser¹ & Prof. Dr. Christine Pauli²

1: University of Zurich, Switzerland; 2: University of Fribourg, Switzerland

Wednesday, September 7th,

1.30 – 1.45 pm Poster Slam, Auditorium / 1.50 – 2.30 pm, Sala Balint



Productive classroom talk is a means for promoting learning. The state of research agrees that teachers should encourage students to verbalize their thinking and participate actively in reasoning. But which forms of classroom discourse can result in deeper learning? Pursuing this question, our study examines how a world problem is worked on in teacher-led settings with small groups in secondary education. The data includes 38 video recordings of student-teacher-talk in small groups, students' notes and individual students' solutions to an additional task (SNF study "Didactic communication and education effects in problem-oriented mathematics education", Reusser & Pauli, 2012). The analysis is based on three theoretical models: 1) The theoretical model of mathematical word problem solving (Reusser, 1997) with the steps establishing an understanding of the situation, mathematizing, calculating and formulating a situational response. To enable learners ultimately to perform these steps autonomously, they need to get opportunities to adopt these steps. Accordingly, high-quality classroom discourse should be very dialogue-oriented and interactive, with a teacher who guides the students by motivational and cognitive scaffolding (Wood, Bruner & Ross 1976; Van de Pol, Volman & Beishuizen 2010). Developing these skills, however, proves challenging for teachers. 2) The approach "Accountable Talk" (Micheals, O'Connor & Resnick, 2008) provide teachers with a collection of practical recommendations for implementing a more dialogical classroom culture. 3) A model to implement a more effective way for content-related learning by active participation of the learner (Krummheuer, G. & Brandt, B., 2001). This model focuses on the involvement and real authorship (Goffman, 1981) of the speaker and the listener in the mathematical argumentation. The principal research question is therefore which forms of student-teacher talk in guided small group settings lead to robust knowledge construction?

The main findings are

- in order to successfully facilitate the learning process, the core elements of the mathematization process have to be elicited in the talk;
- the thinking time that the students receive is a crucial criterion for knowledge acquisition;
- letting learners act as equal interlocutors can make them take over the lead of the talk and bring about deeper learning, e.g. by initiating an extended discussion of different solutions;
- teachers tend to be either focused on the learners' participation or on knowledge acquisition, there are only a few teachers who can combine both;
- Content related peer interaction is productive but occurs rarely.

Poster Session 3.7

The Influence of Exclusionary Framings on Teacher Sensemaking and Dialogic Discussion Practice

Dr. Marguerite Walsh & Prof. Dr. Lindsay Clare Matsumura
University of Pittsburgh, US

Thursday, September 8th,
4.30 – 4.45 pm Poster Slam, Auditorium / 4.55 – 6.00 pm, Sala Balint



Dialogic classroom discussions that position students to actively co-construct meaning with their teacher and peers is a core feature of contemporary 'student-centered' instructional reforms. Facilitating such discussions involves developing teachers' 'professional vision' for noticing and interpreting their teaching choices relative to students' opportunities to meaningfully express their thinking and ideas in discussion. This poses a considerable challenge within education systems that have traditionally acculturated a view of teaching and learning as a process of knowledge transmission and accumulation, affording students little to no intellectual authority to shape the content and flow of classroom activity. Moreover, deeply embedded assumptions about student ability hierarchies and expectations for learning have long impeded students' access to enriching classroom experiences, particularly for students of color and other historically marginalized groups.

Video-based professional development that supports teachers to critically analyze and discuss their videoed classroom interactions with peers or an expert coach is an increasingly popular approach for developing teachers' professional vision and skill for dialogic pedagogies (Authors, 2020; 2021; Borko et al., 2008; Murphy et al., 2018). Classroom video is powerful because it conveys the complexity of real classroom interactions while allowing teachers to deliberate and reflect in ways that can lead to new insights (Borko et al., 2008). However, relatively little research has explored how specifically video reflection leads to changes in teachers' reflection, learning and skills at implementing dialogic classroom discussions.

This paper presents results from an in-depth comparative case study of two teachers participating in a video-based coaching program (Online Content-Focused Coaching). Specifically, we investigate variation in teachers' sensemaking around their videoed classroom discussions across coaching cycles, and growth in their dialogic teaching skills. Findings suggest that variation in the extent to which the teachers invoked exclusionary frames in their sensemaking was consequential for their levels of growth in professional vision and text discussion quality.

Poster Session 3.8

Revisiting Revoice – Distinguishing between teacher facilitation moves in classroom dialogue

Edith Bouton & Prof. Dr. Christa Asterhan
Hebrew University of Jerusalem, Israel.

Thursday, September 8th,
4.30 – 4.45 pm Poster Slam, Auditorium / 4.55 –
6.00 pm, Sala Balint



Revoice is one of several elusive, yet rich and potent teacher facilitation moves that have received extensive *qualitative* research attention within the scholarly field of academically productive dialogues (APD) in the classroom. Among other things, it helps recruit students' engagement and active participation, support sense making and promote conceptual understanding. However, the rarity and complexity of revoice poses significant methodological challenges to meeting interrater reliability thresholds, and consequently it is often omitted from *quantitative* research efforts.

We demonstrate how it is possible to use the extensive theoretical guidelines to deconstruct the phenomenon of revoice into three distinguished and more common verbale acts: a) acknowledgement of the idea to the original speaker. b) performing a retroactive contextualization of the original statement to better clarify it to the rest of the class, and c) inviting the original speaker to comment on the inferences made. We further deconstruct these three verbal acts into smaller five dialogue elements (DEs), particles of discourse that are clearly defined operationally, and are more common in everyday classroom talk: Refer (captures acknowledgments), Repetition and Elaboration (captures teachers' extended clarification and iteration of the original idea to the classroom) and Invitation and Evaluation (captures teacher's invitation of evaluation on her inferences from the original speaker).

By coding each turn none, one or more of these dialogue elements and adding a post hoc analysis stage, we can extract turns which contain the specific combination of DEs relevant for revoice and distinguish those from similar, yet different teacher dialogue facilitation moves such as recapping, reformulating and simple repetitions. We term this approach for coding Dialogue Elements to Complex Construct Approach (DECCA) and show how it enables empirical examination of important research questions regarding complex, rare yet interesting and potentially potent APD constructs such as revoice, in quantitative methods.



Digital Learning Discourse (Public Panel Discussion)

Even before COVID-19, student and teacher learning has increasingly been taking place in remote settings that allow for interaction and discourse. Widely available digital technologies afford flexibility in term of time and space. However, they also entail certain constraints on learning discourse. In this public event, experts on productive talk in classroom discourse and discourse for teacher learning will discuss new opportunities and challenges of [Digital Learning Discourse](#).

Moderator: Prof. Dr. Dominik Petko, University of Zurich, Switzerland
Guests: Prof. Dr. Christa Asterhan, Hebrew University of Jerusalem, Israel
Prof. Dr. Sara Hennessy, University of Cambridge, United Kingdom
Prof. Dr. Sten Ludvigsen, University of Oslo, Norway
Prof. Dr. Lindsay Clare Matsumura, University of Pittsburgh, USA

Date: Thursday, September 8th, 8.15-9.30 pm

This event is presented in a hybrid format and streamed live via zoom. It is open for all interested researchers, practitioners and the general public.

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[Redacted]

[Redacted]

[Redacted]

[Redacted]

Further Participants



Patrik Bachmann

Patrik Bachmann works at the University of Teacher Education Schwyz as a music teacher. He is also mentor teacher and since 2020 head of the department for field experiences. He is responsible for cooperating teachers' basic preparation for their coaching role during the teaching practica.



Yvonne Dammert

Yvonne Dammert is a teaching and research assistant at Bern University of Teacher Education and at the University of Teacher Education Lucerne. In her PhD project (supervised by Prof. Dr. Christine Pauli) she evaluates a one-year video-based coaching program to foster teachers' conversational skills for dialogues in literacy classes.



Prof. Dr. Doreen Holtsch

Prof. Dr. Holtsch is professor of upper secondary and economic and business education at the University of Zurich. Her research focuses on teachers' professional competence, using quantitative and qualitative research approaches, including video analysis.



Dr. Daniela Knüsel-Schäfer

Dr. Daniela Knüsel Schäfer is a lecturer in Educational Studies at the University of Teacher Education Schwyz. She is also head of a project with collaborating schools ("Partnerschule Berufspraxis») in which Lesson Studies are used for student teachers' learning during field experiences.

Further Participants



Dr. Chiara Piccini

Dr. Piccini teaches didactics and classroom communication to teachers working in vocational schools, at EHB (Lugano regional office). She is interested in educational dialogue and teachers' professional development, with particular reference to discursive-analytical approaches and the interaction between technologies and teaching strategies.



Daniela Rupp

Daniela Rupp is a teacher for pedagogy and psychology at Gymnasium St. Klemens, Ebikon and a doctoral student at the University of Zurich. She has published research articles on mentoring dialogues and relations to student teachers' self-efficacy development and is also interested in classroom dialogue.



Anita Schaffner Menn, lic.phil.

Anita Schaffner Menn works in teacher education and is leading the study program for kindergarten teachers and primary school teachers at the Institute Unterstrass at Zurich University of Teacher Education. Productive talk and dialogic quality are main topics in her teaching (didactics, classroom management and developmental psychology) and coaching of (prospective) teachers.

Cancelled Sessions

Pedagogically Productive Talk among Teachers: Operationalizing and Critiquing an Emergent Theoretical Framework

Prof. Dr. Adam Lefstein
Ben-Gurion University of the Negev, Israel

~~Monday, September 5th, 2.00-4.00 pm~~

Prof. Dr. Adam Lefstein is the Shane Family Professor of Education in the Department of Education at the Ben-Gurion University of the Negev, Israel. His current research projects explore teacher professional conversations and academically productive dialogue. Prof. Lefstein is an experienced facilitator of research workshops on linguistic ethnographic analysis of discourse and communication data.



In this workshop we will critically explore a theoretical framework for investigating pedagogically productive talk among teachers. This framework is based upon an analysis of teaching practice and its cognitive and social demands on practitioners, available evidence about the prevalent norms of teacher discourse in workgroups and professional learning settings, and the practical experience of an interdisciplinary team of Israeli researchers and practitioners who have been developing and refining the framework over the past seven years.

Pedagogically productive talk is teacher collaborative discourse that (1) is focused on problems of practice: teachers discuss issues and concerns that have arisen in their classrooms; (2) involves pedagogical reasoning: the use of evidence, explanations, and reasons to interpret classroom events and analyze and justify courses of action; (3) is anchored in rich representations of practice, for example, student work, video recordings of classroom practice; (4) is multivoiced: different perspectives are presented and attended to; (5) includes generative orientations toward students, learning, content, teaching, and problems of practice; and (6) combines support and critique: fostering trust and collegiality, on the one hand, and critical, problematizing inquiry on the other.

Repeated participation in talk with these six features is presumed to socialize teachers into productive ways of talking and thinking about practice, dispositions to reflect on and improve practice, and a commitment to student learning and teaching excellence. Moreover, sustained engagement in such talk is assumed to strengthen a teacher team's capacity to serve as a social and professional resource. This conceptualization can serve as the basis for hypotheses for researching teacher talk, and/or as the basis for designs for cultivating on-the-job teacher learning.

The proposed workshop will involve (a) presentation of the framework and its theoretical underpinnings and evidence base; (b) application of the framework to analysis of a transcribed and video-recorded segment of teacher collaborative discourse; and (c) critical discussion of the advantages and shortcomings of the framework, challenges in operationalizing it, missing elements, its cross-cultural applicability, and possibilities for research and practical interventions.

Transfer to Monte Verità

Shuttle Bus

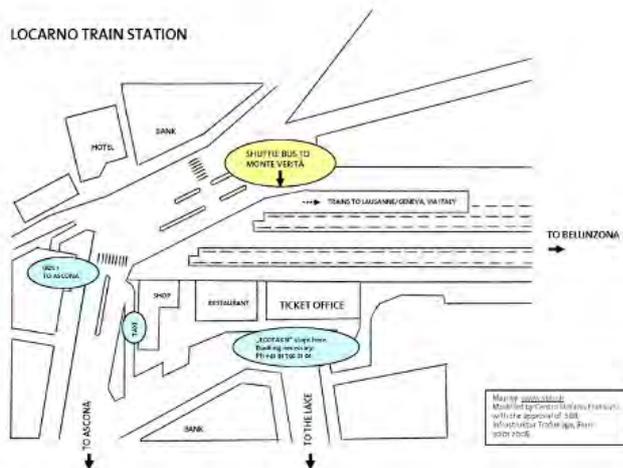
On Sunday, September 4th, 2022, there will be a shuttle-bus-service (free of charge) between Locarno main station and the Monte Verità conference center.

Departure times from Locarno main station:

13.20, 14.20

16.00, 16.50, 17.30, 18.20

The minibus stops next to the end of platform 4 (close to where public transport is leaving). Look for the white bus with the Monte Verità logo.



The minibus has 9 seats. In case the minibus is already full, or you arrive outside of the schedule, you have the following options to get to Monte Verità from Locarno main station:

- Transfer by bus (for trains arriving between 14:20-15:35 and trains arriving between 16:45-17:35)
- Transfer by bus and on foot (every 15min until 23:59)
- Transfer by Taxi (any other time)

Transfer to Monte Verità

Transfer by Bus

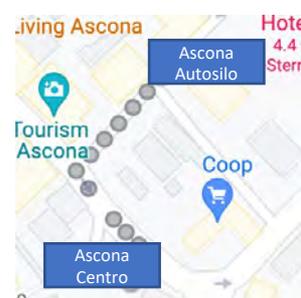
Take bus no. 1 from Locarno (Piazza Stazione, Kante C, Direction Losone) to the bus stop „Ascona, Centro“(duration: about 12 minutes). Walk to the bus stop „Ascona Autosilo“(130m, behind the supermarket COOP) and then take bus no.5 "Buxi" (Direction Ascona) to Monte Verità (duration: about 8 minutes). You can also switch busses at „Ascona, Via Medere“.

Bus 1 departs at Locarno every 15min (possible connections:

14:49, 15:14, 15:29, 15:44 / 16:59, 17:14, 17:29, 17:44)

Bus 5 departs from Ascona, Autosilo at 16:00 and 18:00
and at Ascona, Via Medere at 16:01 and 18:01

For more information, please check Google Maps or www.sbb.ch/en



Transfer by Bus and on Foot

Take bus no. 1 to „Ascona, Centro“ (see above). Walk along the street until you reach the post office and turn left into the street Via Borgo. Then walk until you reach the Boutique-Hotel Antica Posta. Opposite the hotel is the Scalinata della Ruga staircase that leads up to Strada Colina. Follow this route until you reach the branching onto the road to Monte Verità. It is a 20-min walk up the stairs/hill, which we only recommend if you are fit and if it is not too hot.

Transfer by Taxi

Various taxis are available at Locarno railway station. If possible, use the company "EcoTaxi" which usually has slightly lower prices. However, you need to make a reservation via phone:

+41 91 792 21 01

0800 321 321 (free call from Swiss numbers)

or via Skype.

The ride takes approximately 15 minutes and costs about CHF 30.00. If there are any problems with payment in CHF, the taxi can also be paid at the hotel reception.

In case of unexpected problems with your arrival or departure and if you need support at short notice, you can contact Eva Becker by phone or via Whatsapp [REDACTED].

Information for your Arrival



Check-in for the conference starts at 3.00 p.m. Head to the reception desk of Hotel Monte Verità.



Registration for the conference with collection of conference bags from 4.00 p.m. to 7.00 p.m. at the desk located near the entrance of Hotel Monte Verità.



Welcome Drink at 6.15pm at Spazia Roccia (see [p. 26](#) for Site Map).



Dinner starting at 7.00 pm at Sala Luce. Please wear your conference badge for dinner.



Movie night in the Auditorium at 8.45pm (we will show the [REDACTED] duration 2 hours).