



## Opening Session & Keynote Speeches 1

23 November 2022 08:45 - 10:00

K33 - A0.05

EAPRIL Keynote

### Teacher Learning through Talk in Lesson Studies

**Keywords:** 21st century learning, Collaborative Learning, Continuing professional development in Teachers, Innovations in education

**Interest group:**

**Chairperson:** Martijn Willems, Windesheim University of Applied Sciences, Netherlands

In this presentation I will focus on teachers learning from their students' learning when participating in Lesson Studies. Teachers do so by trying to understand and challenge different perspectives on the learning of their students. Their talk can provide them an opportunity to explore different perspectives beyond one's own already acquired perspective. Teacher talk in Lesson Studies can be a mediating component of teacher learning for this popular professional development approach. Already a century ago, Lesson Study was developed in Japan by teachers. Since a few decades it is spreading across the world. Throughout Europe, it can be considered a relatively new teacher professional development. It is characterized by teachers' collaborative and inquiry learning, a strong alignment with teachers' own teaching practice, and a combined focus on student learning and subject matter content. Lesson Study can be characterized as a system for building and sharing practitioner knowledge that involves teachers in learning from colleagues as they research, plan, teach, observe, and discuss a classroom lesson. An important feature is the collective focus on student learning via teachers' dialogue and activities are centered on promoting student learning and development.

### Teacher Learning through Talk in Lesson Studies

**Presenting Author:** Sui Lin Goei, Windesheim University of Applied Sciences, Netherlands

In this presentation I will focus on teachers learning from their students' learning when participating in Lesson Studies. Teachers do so by trying to understand and challenge different perspectives on the learning of their students. Their talk can provide them an opportunity to explore different perspectives beyond one's own already acquired perspective. Teacher talk in Lesson Studies can be a mediating component of teacher learning for this popular professional development approach. Already a century ago, Lesson Study was developed in Japan by teachers. Since a few decades it is spreading across the world. Throughout Europe, it can be considered a relatively new teacher professional development. It is characterized by teachers' collaborative and inquiry learning, a strong alignment with teachers' own teaching practice, and a combined focus on student learning and subject matter content. Lesson Study can be characterized as a system for building and sharing practitioner knowledge that involves teachers in learning from colleagues as they research, plan, teach, observe, and discuss a classroom lesson. An important feature is the collective focus on student learning via teachers' dialogue and activities are centered on promoting student learning and development.

## Opening Session & Keynote Speeches 2

23 November 2022 08:45 - 10:00

LvS10 - F0.70

EAPRIL Keynote

Lifelong learning

### Preparing for continuous learning in formal education

**Keywords:** 21st century learning, Innovations in education, Lifelong Learning, Workplace learning

**Interest group:**

**Chairperson:** Essi Ryymin, Häme University of Applied Sciences, Finland

We live in an increasingly complex and changing world. Learning and working are increasingly intertwined, and continuous learning and innovation are becoming more important. Upcoming challenging and often complex situations provide opportunities to work, learn and innovate together. In this keynote, we will focus on creating powerful learning- and working environments. These environments aim to stimulate the development of adaptive expertise, continuous learning and innovation for both students and professionals. We introduce core design principles to help create these powerful learning and working environments and to maintain them across the lifespan so that learning and working come closer together and learners, learning workers and working learners find support and direction for their continuous learning. We will specifically address the role of formal education and the role of educators as brokers in creating and supporting these learning and working environments with knowledge, expertise and through practice based research, as well as the role of formal education in preparing students for continuous learning within these powerful learning and working environments.

### Preparing for continuous learning in formal education

**Presenting Author:** Wietske Kuijer-Siebelink, HAN University of Applied Sciences, Netherlands; **Presenting Author:** Jos Sanders, HAN University of Applied Sciences, Netherlands

We live in an increasingly complex and changing world. Learning and working are increasingly intertwined, and continuous learning and innovation are becoming more important. Upcoming challenging and often complex situations provide opportunities to work, learn and innovate together. In this keynote, we will focus on creating powerful learning- and working environments. These environments aim to stimulate the development of adaptive expertise, continuous learning and innovation for both students and professionals. We introduce core design principles to help create these powerful learning and working environments and to maintain them across the lifespan so that learning and working come closer together and learners, learning workers and working learners find support and direction for their continuous learning. We will specifically address the role of formal education and the role of educators as brokers in creating and supporting these learning and working environments with knowledge, expertise and through practice based research, as well as the role of formal education in preparing students for continuous learning within these powerful learning and working environments.

## Sessions A 1

23 November 2022 10:45 - 12:15

GWW1 - (0).09

EAPRIL Cloud Spotlight Session

Workplace learning

### CLOUD 2 - Designing for student teacher's feedback literacy: a collaborative learning approach

**Keywords:** Assessment and evaluation, Collaborative Learning, Professional Development, Professionalisation of educators

**Interest group:** CLOUD 02 - Educators' professional development

Teacher educators often experience difficulties in implementing innovative pedagogies. Recently attention is drawn towards feedback literacy as an important requirement in self-directed learning. For teacher educators this means that they require skills to enhance the impact of feedback processes. Fontys University of Applied Sciences developed a PDP for educators to acquire skills to enhance student teachers' feedback literacy. The PDP consisted of learning communities in which educators, teachers and students learned collaboratively using design thinking. To support the design process a toolkit was developed. In this workshop we aim for: 1) Providing delegates with insights and tools for enhancing student teachers' feedback literacy; 2) Introducing delegates in an effective design process. During the workshop elements of the Toolkit Innovation Teams will be used to develop or adept practical tools that enhance teacher feedback literacy. Examples of previously developed tools are shared. Also learning outcomes with regard to teacher feedback literacy, that resulted from using the toolkit, will be

discussed.

### **CLOUD 2 - Designing for student teacher's feedback literacy: a collaborative learning approach**

**Presenting Author:**Anje Ros, Fontys University of Applied Sciences, Netherlands; **Presenting Author:**Henderijn Heldens, Fontys University of Applied Science, Netherlands

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#### **Sessions A 2**

23 November 2022 10:45 - 12:15

GWV1 - (0).15

EAPRIL Cloud Spotlight Session

Higher education

### **CLOUD 11 - Practice-based research: boundary talk**

**Keywords:** Innovations in education, Practice-based research (methodology), Research-based learning, Training of young researchers

**Interest group:** CLOUD 11 - Practice-based Research Methodology

Since 2018 EAPRIL supports Cloud 11 practice-based research methodology, a network in which we try to find out how to achieve quality in practice-based research (PBR). We view PBR as arising from concrete issues of practice and which is conducted for, in or with that practice with the explicit aim to generate relevant knowledge that can be used to contribute to practice. According to the latest insights, the research should to this end be practically relevant, methodologically rigorous, and ethically acceptable. In the past years we've had several Spotlight sessions on the EAPRIL conferences where an open dialogue about several cases of practice-based researchers was held. In these dialogues we explored the dilemmas and developed our model further based on these data. In the Cloud 11 Spotlight Session in the conference of 2022 we want to take a step further by putting our insights to use. We would like to use our model to help participants in taking and making perspectives of different stakeholders to come to insight in what to talk about with the stakeholders in PBR when it comes to rigor, relevance and ethics.

### **CLOUD 11 - Practice-based research: boundary talk**

**Presenting Author:**Lisette Munneke, Utrecht University of Applied Sciences, Netherlands; **Presenting Author:**Niek van den Berg, Aeres University of Applied Sciences Wageningen, Netherlands; **Presenting Author:**Marco Mazereeuw, NHL Stenden University of Applied Sciences, Netherlands

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#### **Sessions A 3**

23 November 2022 10:45 - 12:15

K35 - (0).20

EAPRIL Spotlight Session

Higher education

### **A holistic approach of digital competences for teaching and learning**

**Keywords:** 21st century learning, Educational Technology, Lifelong Learning, Professional Development

**Interest group:** CLOUD 01 - Teacher education

The integration of ICT in education is a complex and multidimensional process, which requires a fundamental change in the professional behavior and mindset of teachers. In order to achieve transformation in the learning process, new working methods, new resources, new learning objectives and a targeted change in the educational organization come together. All this requires an integrated approach. The iXperium/Centre of Expertise Teaching and Learning with ICT is a network organization in the field of learning and teaching with ICT, consisting of the HAN research group 'Learning with ICT' and a growing number of schools from primary, secondary, vocational, higher education and teacher training institutes from all over the Netherlands. It is a learning and working environment in which teachers, teacher educators, students, researchers and ICT experts come together to shape new education with technology based on practice-oriented research. Eight ingredients are being used as part of the approach to further develop personalized learning with the use of ICT and the empowerment of students for a digital society. During the workshop you'll get a brief introduction on the different components and will then be able to get a hands-on taste of a sample of them.

### **A holistic approach of digital competences for teaching and learning**

**Presenting Author:**Marijke Kral, HAN University of Applied Sciences, Netherlands

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#### **Sessions A 4**

23 November 2022 10:45 - 12:15

GWV1 - (1).08

Workshop  
Workplace learning

#### **Opportunities to enhance the role of workplace mentors in teacher education.**

**Keywords:** Higher education, Mentoring, Professionalisation of educators, Workplace learning

**Interest group:** CLOUD 01 - Teacher education

In this workshop we will share the outcomes of a number of practical research initiatives which focussed on: Sensitising mentors of their role as co-educator A shift in the focus of tutoring/mentoring to enhancing learner agency of student teachers Dialogical techniques to discuss interventions of mentors and the impact these interventions have on their student teachers In this workshop the major outcomes of these research initiatives will be shared actively, after which the participants are invited to couple these findings to their own situation, sharing and deepening practical outcomes in future interventions and professional dialogue settings. The workshop will be concluded by a plenary summary of practical tools aimed at sensitising and enhancing mentor roles and shifting from mentor-regulated to self-regulated learning.

#### **Opportunities to enhance the role of workplace mentors in teacher education.**

**Presenting Author:**Martin VanderPlas, Scalda, Netherlands; **Co-Author:**Bob Koster, Fontys University of Applied Sciences, Netherlands

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#### **Sessions A 5**

23 November 2022 10:45 - 12:15

GWW1 - (-1).13

Workshop

Higher education

#### **What type and level of research capacity is needed for bachelor pre-service teachers?**

**Keywords:** Initial Teacher Education (Pre-service), Inquiry learning, Research-based learning, The role of research on learning and instruction in developing education systems

**Interest group:** CLOUD 01 - Teacher education

Students of universities of applied sciences are educated to become practitioners. They have to solve problems that arise from professional practice in a critical and evidence-informed manner and with appropriate rigor. Universities struggle with the required level of research competence that practitioners need and how bachelor students should prove this competence. A national working group of Dutch teacher educators developed a referential framework for research competence of bachelor pre-service teachers. The framework is meant to be helpful in identifying assessment indicators and building study programmes. The current framework leaves space for teacher-educators to make university specific choices. Moreover, there are some unresolved questions. For instance, which stakeholders need to participate in what way and on what level in student research, how do development of reflective attitude and research competence interact, what deliverables are valid indicators of research competence? The aim of the workshop is to validate the framework with an international group of teacher educators and researchers. We present the framework and current discussion topics. Next, we invite participants to express their ideas, concerns and good practices in a Worldcafé-setting and choose topics to discuss plenary. Obtained insights are used to further clarify, adjust and sharpen the framework.

#### **What type and level of research capacity is needed for bachelor pre-service teachers?**

**Presenting Author:**Jeroen Rozendaal, University of Applied Science Rotterdam Hogeschool Rotterdam, Netherlands; **Presenting Author:**Monique A.M. Ridder, Windesheim University of Applied Sciences, Netherlands; **Co-Author:**Monique van de Laarschot, Hogeschool Utrecht, Netherlands; **Co-Author:**Dorien Doornebos-Klarenbeek, Fontys University of Applied Sciences, College of Education, Netherlands

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#### **Sessions A 6**

23 November 2022 10:45 - 12:15

GWW1 - (1).11

Workshop

Vocational education

#### **Care for (the) future: a scenario tool**

**Keywords:** Innovations in education, Lifelong Learning, Vocational education, Workplace learning

**Interest group:** CLOUD 05 - HRD & Workplace learning

A combination of new technologies and changing societal demands is changing the healthcare sector in the Netherlands and induces the way of working in healthcare. This challenges healthcare education to equip (future) healthcare professionals with proficient knowledge, skills and confidence to engage in work and to make a difference in the transformation of the healthcare sector. Traditionally, the Dutch VET-system knows school-based and dual pathways. However currently at local level, VET-institutes (providing healthcare education at senior secondary level) work closely together with healthcare organizations to design so-called practice based tracks (PBT) in which learning and work practices are intertwined. In this workshop we will present a tool that helps designing such a practice based track. Participants will be given a brief experience in using the tool. Next implications of designing and implementing a PBT will be discussed at both practical and more strategic level.

#### **Care for (the) future: a scenario tool**

**Presenting Author:**Aimee Hoeve, HAN University of Applied Sciences, Netherlands; **Presenting Author:**Haske van Vlokhoven, HAN University of Applied Sciences, Netherlands; **Co-Author:**Pietie Visser, Roc Friese Poort, Netherlands; **Co-Author:**Ineke Moonen, ROC Nijmegen, Netherlands; **Co-Author:**Joke Christiaans, Nova College, Netherlands; **Co-Author:**Karel Kans, Centre for Expertise in Vocational Education and Training (ecbo), Netherlands

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#### Sessions A 7

23 November 2022 10:45 - 12:15

GWW1 - (-1).14

Workshop

Vocational education

##### **Multi-stakeholder design: Support factors for developing curricula at the school-work boundary.**

**Keywords:** Collaborative Learning, Curricula, Innovations in education, Professionalisation of educators

**Interest group:** CLOUD 02 - Educators' professional development

Vocational education teachers are increasingly confronted with the need to engage in multidisciplinary and inter-organizational curriculum (re)design, especially to develop or scale up learning environments at the school-work boundary, such as regional learning environments (Oonk et al., 2020) and hybrid learning configurations (Cremers et al., 2016). Collaborative, team-based approaches in curriculum design are promising, but challenging because teams require tailored support. Based on a recent literature study, key aspects of such support have been identified and organized into a conceptual framework (Custers et al., in preparation). This framework has been translated to a game. By playing the game participants get to know and reflect on the supportive infrastructure necessary for collaborative curriculum design. Here, infrastructure refers to the human, material and structural features of context (McKenney, 2019) that are known to facilitate the multi-stakeholder design work. Participants become sensitized to key factors articulated in the conceptual framework. This could offer a useful knowledge base for other researchers interested in multi-stakeholder design processes to build onto. For multi-stakeholder design teams members or facilitators, it could trigger reflection on and dialogue about whether the support factors that are necessary for multi-stakeholder design teams to thrive are present in their particular contexts.

##### **Multi-stakeholder design: Support factors for developing curricula at the school-work boundary.**

**Presenting Author:** Maria Custers, ELAN, University of Twente, Netherlands; **Co-Author:** Miranda Snoeren, Fontys University of Applied Sciences, Netherlands;

**Co-Author:** Susan McKenney, ELAN, University of Twente, Netherlands

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#### Sessions A 8

23 November 2022 10:45 - 12:15

GWW1 - (1).20

Workshop

Lifelong learning

##### **Exploring and developing adaptive expertise in a Moodle**

**Keywords:** Beliefs and conceptions of teaching, Continuing professional development in Teachers, Educational Effectiveness and quality of education, Professional Development

**Interest group:** CLOUD 03 - Strategies to improve teaching and learning environments

In this workshop, we address the development of adaptive expertise for (beginning) teachers. In an Erasmus+ Project, we have been busy developing tools and building blocks that can help teachers to (1) become aware of the necessity of adaptive expertise and (2) help them in developing this expertise. For this purpose, a Moodle was developed. A Moodle is an online learning environment with tasks and learning opportunities. In the workshop, we invite participants to explore the Moodle and discuss the content. They will be able to rate the usefulness and user-friendliness of the Moodle and how they think the Moodle can be applied in teacher education and/or in teacher professional development.

##### **Exploring and developing adaptive expertise in a Moodle**

**Presenting Author:** Quinta Kools, Fontys Hogescholen, Netherlands; **Co-Author:** Julian Ng, Warnborough College, United Kingdom; **Co-Author:** Liesbet Vroman, Katholiek Onderwijs Vlaanderen, Belgium

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#### Sessions A 9

23 November 2022 10:45 - 12:15

GWW1 - (0).08

Present & Discuss

Lifelong learning, Workplace learning

##### **Lifelong Learning in Different Contexts**

**Keywords:** Collaborative Learning, Distance Education, Educational Effectiveness and quality of education, Higher education, Instructional Design and Instructional Strategies, Lifelong Learning, Training of young researchers, Work environments, Workplace learning, Writing

**Interest group:** CLOUD 03 - Strategies to improve teaching and learning environments, CLOUD 05 - HRD & Workplace learning

**Chairperson:** Martine Hasselman, Saxion - University of Applied Sciences, Netherlands

##### **Guideline for an effective digital pedagogical setup: a first service.**

**Keywords:** Distance Education, Educational Effectiveness and quality of education, Instructional Design and Instructional Strategies, Lifelong Learning

**Presenting Author:**Sandrine Favre, PHBern, University of Teacher Education, Switzerland; **Co-Author:**Alexander F. Koch, HEP Fribourg, Switzerland

This is to present a theoretical perspective on instructional quality of self-guided e-learning modules for in-service teachers and to use an empirical approach to translate classroom-based guidelines into fully digital environments. The focus is to integrate concepts of teaching quality and epistemic approaches in order to find higher-order components of a digital pedagogical design. In addition we will present an operationalization of how the components can be used to evaluate digital learning modules. After a review of teaching quality research and ideas to translate classroom-practice to digital learning we re-aligned practical advice with educational-psychological knowledge and incorporated digital didactical views in a qualitative coding framework. In a consensual expert coding we developed semantic maps and found five dimensions of high quality digital self-learning environments: Learner activation and competence orientation, Information transmission and presentation, responsiveness and communication of the system, Prompts toward student attention, and Strategies. The dimensions can be categorized in "engagers", which include basic requirements to achieve a good quality level and "accelerators", which will improve the learning efficacy of the learning environment.

#### **Collaboration between learning professionals and construction management to improve worksite safety**

**Keywords:** Collaborative Learning, Lifelong Learning, Work environments, Workplace learning

**Presenting Author:**Emmanuel Manalo, Kyoto University, Japan; **Presenting Author:**Rio Yoshida, Kyoto University, Japan; **Presenting Author:**YU-JR LAN, Kyoto University, Japan; **Co-Author:**Hiroaki Ayabe, National Institute for Physiological Sciences, Japan; **Co-Author:**Yuji Watanabe, Toda Corporation, Japan; **Co-Author:**Ayano Tsuda, Kyoto University, Japan; **Co-Author:**Noriko HANAKI, Open University of JAPAN, Japan; **Co-Author:**Akihiro Tanabe, Toda Corporation, Japan

It is not common for big construction companies to call upon learning professionals to collaborate with them in efforts at reducing worksite accident rates. In this presentation, we will describe one such collaboration, which addresses two main questions: (1) What human factors contribute to accidents in construction worksites? (2) How can we address those factors to reduce accident rates? The project can be described as a mixed-methods research in the real world (Fielding, 2010). To answer the two questions, we employed a variety of methods, including document analysis, interviews, surveys, observations, and quasi-experiments. Results/outcomes in the first year of the project include proposals for revising subcontractor contracts/agreements to include accident prevention plans, and specific improvements to worksite safety training methods to enhance impact on workers. We consider the quality of the project thus far based on the four dimensions proposed by Furlong and Oancea (2005): epistemic, economic, technological, and capacity building and value for people. We conclude that, because learning is fundamental in all kinds of work, collaborations that combine the expertise of learning professionals and the wisdom of practitioners have the potential to solve even the most challenging and diverse workplace problems – in this case, the occurrence of accidents.

#### **What makes writers' groups flourish...or fizzle? A framework for sustainability**

**Keywords:** Higher education, Lifelong Learning, Training of young researchers, Writing

**Presenting Author:**Sarah Haas, Copenhagen University (Department of Science Education), Denmark

The format of writers' groups can vary greatly; there is no one 'recipe' for a successful writers' group. While this offers flexibility and adaptability, the lack of precise 'how-to' can leave those just starting out wondering how to proceed; or some groups can begin with enthusiasm, only to quickly fizzle out. To examine the question of what makes writers' groups flourish or fizzle, 950 writers' logs from PhD students in the natural science, collected over 9 years, were analysed, isolating reasons members gave for continuing in their writers' groups, or deciding to leave. The results of the analysis suggest four main factors involved in writers' decisions: safety; logistics; purposes and procedures; and support. Using the results of the analysis, a flexible model for setting up sustainable writers' groups was derived. The model has been tested and adapted over the last three years. Preliminary results suggest that the model functions well as a guide in setting up groups, and keeping them going.

#### **Sessions A 10**

23 November 2022 10:45 - 12:15

GWW1 - (0).37

Present & Discuss

Higher education, Primary education

#### **Learning in Digital Era**

**Keywords:** Blended learning, Continuing professional development in Teachers, Distance Education, Educational Technology, Higher education, In-service Teacher Training, Motivation, Well-being and engagement

**Interest group:** CLOUD 06 - Learning in Digital Era: Technology Enhanced Learning

**Chairperson:** Alfred Steinbach, Switzerland

#### **Yearly Trends in Student Motivation to Learn at an Online University and Comparison by Academic Year**

**Keywords:** Distance Education, Educational Technology, Higher education, Motivation

**Presenting Author:**Yasuhisa Kato, Tokyo Online University, Japan

Online learners must take the distance learning course alone from start to finish, learning at their own pace. As a result, some learners easily feel lonely, and some stop learning due to lack of motivation. This paper compares the results of a 2021 survey of enrolled students at Tokyo Online University on motivation to learn with the results of a similar student survey conducted in 2022 to analyze whether there have been changes in motivation to learn. In addition, the 2022 survey included the analysis of the difference between first-year and fourth-year students. Differences were analyzed using the Mann-Whitney U test. 94 students responded to the survey in 2021 and 90 in 2022. The analysis of the 2021 survey showed that online college students were more autonomous and self-directed and less communication oriented than general school students. This trend was also true in 2022, with the lowest scores for "making friends" and the highest scores for autonomous learning related to motivation to learn. Compared to first-year students, fourth-year students were less concerned with the university-provided learning progress dashboard and more motivated to learn about their current work.

#### **Community building during and after the pandemic: what have we learned?**

**Keywords:** Blended learning, Distance Education, Higher education, Well-being and engagement

**Presenting Author:**Annegien Langeloo, Hanze University of Applied Sciences, Netherlands; **Co-Author:**Wietske de Vries, Hanze University Groningen. University of Applied Sciences, Netherlands; **Co-Author:**Helena Veselska, Hanze University Groningen. University of Applied Sciences, Netherlands; **Co-Author:**Marca V.C. Wolfensberger, Hanzehogeschool Groningen, Netherlands

One of the biggest challenges for teachers in higher education during the COVID-19 pandemic was building and sustaining communities with students and fellow teachers. Education had to take place mostly online, therefore limiting the amount of face-to-face contact. This can be problematic because feeling part of a community is important for the well-being and work engagement of teachers. To examine how communities were formed during the pandemic and how this was related to teachers' well-being and work engagement, we conducted two questionnaires, in June 2021 (N = 527) and January 2022 (N = 414), as well as focus groups among the teachers at a university of applied sciences in The Netherlands. Preliminary analyses show that teachers experienced a strong sense of community with their students during the pandemic, but that too little attention was paid to building a sense of community among teachers themselves. Furthermore, teachers experienced moderate levels of well-being and work engagement. During EAPRIL we hope to spark a conversation with participants on what we want, could or should take with us from teaching during the pandemic to build even stronger communities with students and among teachers in the future and to support teachers' well-being and work engagement.

#### **"Teaching during the Pandemic: Greek Primary School Teachers' Technology Acceptance"**

**Keywords:** Continuing professional development in Teachers, Distance Education, Educational Technology, In-service Teacher Training

**Presenting Author:**Anna Trikoili, Technical University of Munich, Germany; **Co-Author:**Despoina Georgiou, Utrecht University, Netherlands

In March 2020, the pandemic forced prolonged school closures and an immediate shift to online teaching, imposing high challenges for teachers. This study investigates school teachers' technology acceptance during the Covid-19 emergency remote teaching and links the results to implications for teachers' professional development. Previous research, utilizing the Technology Acceptance Model, indicates that teachers' self-efficacy beliefs towards technology profoundly influence their perceptions on technology's usefulness and ease of use. Both perceptions can be significant determinants of teachers' attitudes towards technology, which in turn define whether teachers use technology or not. We report on survey data from  $N = 144$  Greek primary school teachers who taught online during the pandemic. Results revealed teachers' self-efficacy beliefs and attitudes towards technology to be the most robust predictors within the model. Evidence suggests that teachers who believe that computer use requires little effort and perceive the integration of ICT in teaching as effective would most likely develop positive attitudes towards computers use. Building communities of practice around technology within schools is a tested model for teachers to understand the link between technology integration and successful teaching. We also recommend the implementation of ICT workplace learning opportunities which can be low-stress and engaging.

## Sessions B 1

23 November 2022 13:15 - 14:45  
GWW1 - (0).09  
EAPRIL Cloud Spotlight Session

### **CLOUD 3 - Learning communities, networks and learner-centered approaches**

**Keywords:** Beliefs and conceptions of learning, Collaborative Learning, Educational Technology, Social interaction

**Interest group:** CLOUD 03 - Strategies to improve teaching and learning environments

Cloud 3 is focused on development perspectives on teaching and learning environments, through the application of instructional strategies, design principles, pedagogical approaches, and participatory, learner-centred methods. This cloud aims to build a network of project leaders and practitioner-researchers who are interested in renewing educational practice through research and development. This cloud spotlight session invites experienced and new researchers alike to share their insights, experiments, and knowledge about the application of socio-constructivist learning theories in research and practice. The themes for this session will be the community of inquiry framework in the development of educational practice and interaction; the impact of learning environments on student motivation, project-based learning, and community of practice. We will work together to discuss how these concepts and ideas can be approached and applied to research and develop educational practice. The conference participants will be asked to share their research topics already before the session on a social platform, and to present their questions and challenges to be jointly discussed.

### **CLOUD 3 - Learning communities, networks and learner-centered approaches**

**Presenting Author:** Ilona Laakkonen, JAMK University of Applied Sciences, Finland

Cloud 3 is focused on development perspectives on teaching and learning environments, through the application of instructional strategies, design principles, pedagogical approaches, and participatory, learner-centred methods. This cloud aims to build a network of project leaders and practitioner-researchers who are interested in renewing educational practice through research and development. This cloud spotlight session invites experienced and new researchers alike to share their insights, experiments, and knowledge about the application of socio-constructivist learning theories in research and practice. The themes for this session will be the community of inquiry framework in the development of educational practice and interaction; the impact of learning environments on student motivation, project-based learning, and community of practice. We will work together to discuss how these concepts and ideas can be approached and applied to research and develop educational practice. The conference participants will be asked to share their research topics already before the session on a social platform, and to present their questions and challenges to be jointly discussed.

## Sessions B 2

23 November 2022 13:15 - 14:45  
GWW1 - (0).16  
EAPRIL Cloud Spotlight Session  
Higher education

### **CLOUD 6 - Short instructional videos for the TikTok generation**

**Keywords:** Blended learning, Economy education, Higher education, Web-Based Learning

**Interest group:** CLOUD 06 - Learning in Digital Era: Technology Enhanced Learning

The purpose of this study was to see whether students learn business statistics more effectively from short instructional videos than from real-time virtual class instructions. 221 first-year students followed the weekly mass lectures on introductory business statistics. Then, five classes with 112 students were randomly assigned to a control group to join real-time virtual classes with teachers, while the experimental group of another five classes, 119 students watched short instructional videos and managed the learning process mainly by themselves and teachers only showed up in the last fifteen minutes to answer questions. Six weeks later, all students were required to take an exam. The analysis showed that students in the experimental group significantly outperformed those of the control group. Besides, we have also found that students who are weak in math tend to benefit more from short videos of statistics. The research shed light on the design of a hybrid learning environment, particularly for statistics education at the university level.

### **CLOUD 6 - Short instructional videos for the TikTok generation**

**Presenting Author:** Ning Ding, Hanze University of Applied Sciences, Germany; **Co-Author:** Xiaoyan Xu, Hanze University Groningen. University of Applied Sciences, Netherlands

The purpose of this study was to see whether students learn business statistics more effectively from short instructional videos than from real-time virtual class instructions. 221 first-year students followed the weekly mass lectures on introductory business statistics. Then, five classes with 112 students were randomly assigned to a control group to join real-time virtual classes with teachers, while the experimental group of another five classes, 119 students watched short instructional videos and managed the learning process mainly by themselves and teachers only showed up in the last fifteen minutes to answer questions. Six weeks later, all students were required to take an exam. The analysis showed that students in the experimental group significantly outperformed those of the control group. Besides, we have also found that students who are weak in math tend to benefit more from short videos of statistics. The research shed light on the design of a hybrid learning environment, particularly for statistics education at the university level.

## Sessions B 3

23 November 2022 13:15 - 14:45  
GWW1 - (1).08  
EAPRIL Cloud Spotlight Session

### **10th anniversary of CLOUD 7 Research impact on school development: what do we (not) know?**

**Keywords:** Knowledge Building and Development, Organisation of educational research, Practice-based research (methodology), School Development

**Interest group:** CLOUD 07 - Research impact on school development

In this Spotlight session we invite you to join us in celebrating the 10<sup>th</sup> anniversary of the cloud by looking back and forward into the cloud theme: research impact on school development. The session can be characterized as a co-creation session and is divided in three parts: 1. a presentation of research results

regarding the impact of practice-based research and practitioner' research on school development, 2. drawing a mindmap of existing knowledge and knowledge gaps and 3. we discuss questions that are still open, future developments and themes that can be translated into a knowledge agenda into research impact on school development.

#### **10th anniversary of CLOUD 7 Research impact on school development: what do we (not) know?**

**Presenting Author:**Linda Sontag, NRO, Netherlands; **Presenting Author:**Anje Ros, Fontys University of Applied Sciences, Netherlands

In this Spotlight session we invite you to join us in celebrating the 10<sup>th</sup> anniversary of the cloud by looking back and forward into the cloud theme: research impact on school development. The session can be characterized as a co-creation session and is divided in three parts: 1. a presentation of research results regarding the impact of practice-based research and practitioner' research on school development, 2. drawing a mindmap of existing knowledge and knowledge gaps and 3. we discuss questions that are still open, future developments and themes that can be translated into a knowledge agenda into research impact on school development.

#### **Sessions B 4**

23 November 2022 13:15 - 14:45

GWW1 - (1).11

Thematic Track

Higher education, Lifelong learning, Workplace learning

#### **Thematic Track (CLOUD 14): How to activate lifelong learning among employees in organizations (1)**

**Keywords:** Continuing professional development in Teachers, Corporate learning, Creativity, Higher education, Innovations in education, Knowledge Building and Development, Labour market & formal learning, Lifelong Learning, Organisational learning, Training and Development, Vocational education, Workplace learning

**Interest group:** CLOUD 05 - HRD & Workplace learning, CLOUD 12 - Leadership in Education, CLOUD 14 - The incubator cloud for organisational learning ideas

#### **Scaling up innovation while retaining 'the sparkle': a case study of three innovative practices**

**Keywords:** Corporate learning, Creativity, Organisational learning, Workplace learning

**Presenting Author:**Suzanne Verdonshot, Kessels & Smit, The Learning Company, Netherlands

Social innovations typically start with an intricate or urgent question, for which the people involved aim to find new ways of working. The process of innovation can be seen as a learning process that takes place in practice, and is therefore rather bumpy. People involved can make progress by conducting small experiments, or pilot projects that may lead to breakthroughs in one group, team, or department. The present study investigates how innovation practices can surpass this experimental stage and scale up towards more widespread innovation, while at the same time retaining the 'sparkle' that is often felt in the early stages. The method is a case study consisting of three innovation practices. In total, 18 interviews have been done. The analysis shows that in order to scale up innovation it is important to relate very concrete situations ('zoom in') to the bigger ambition that is strived for ('zoom out'). Scaling up successfully while retaining the sparkle is done step by step. Small steps that contribute to scaling up ('micro-moves') lead the innovation in the direction of the desired image in the future, and at the same time realize progress in the present.

#### **Designing and implementing interventions that facilitate self-directed learning in the workplace.**

**Keywords:** Corporate learning, Knowledge Building and Development, Lifelong Learning, Workplace learning

**Presenting Author:**Anna van der Horst, Justus Liebig University Giessen Germany, Eelloo Netherlands, Netherlands

Careers are becoming more flexible. Employees must continuously prepare for change to stay in control (Savickas, 2013). Therefore, L&D professionals are looking for ways to facilitate lifelong and self-directed learning in organizations. Too often learning interventions are a great start, but do not translate into lasting effects. In this study I tried to find out what initiates and facilitates self-directed learning in practice and how L&D professionals can contribute to the success of a learning intervention. I conducted a qualitative study using the positive deviance (PD) approach (Singhal & Svenkerud, 2019). This approach identifies what is going right to amplify it, as opposed to focusing on what is going wrong. It also encourages people to gain firsthand knowledge, because knowledge people gather themselves has a much greater impact than knowledge they gain from others (Kessels, 2005). In this study 15 structured interviews with L&D consultants on their successful experiences with initiating self-directed learning in organizations, where analyzed by a group of colleagues (L&D professionals). This resulted in six principles for self-directed learning and six success factors for implementing such interventions. The principles and success factors are intended to help L&D professionals design and implement interventions that really contribute to continuous learning in organizations.

#### **LIFELONG LEARNING: COOPERATION WITHIN ENGINEERING EDUCATION AND INDUSTRY**

**Keywords:** Corporate learning, Higher education, Lifelong Learning, Workplace learning

**Presenting Author:**Liudmila Bolsunovskaya, National Research Tomsk Polytechnic University, Russian Federation

*The trend of lifelong learning is becoming the main unifying feature of education around the world. Large-scale social and economic changes and the development of technologies have become a catalyst and drivers for the evolution of this trend. To meet society's challenges the successful future engineer should be ready to study throughout their whole life. The article analyses several key elements of current Russian policy in terms of their potential contribution to the fostering of a learning culture, seen as a support for lifelong learning. The purpose of this research is to provide a summary of the evidence related to issues associated with the definition of lifelong learning and to present the results of the survey concerning different options of lifelong learning for industries' staff. According to the survey among graduates working in the industries' plants it was defined which types of lifelong learning can be provided by Vocational Education. The paper also reviews existing barriers and explores how to boost participation industries in the university educational process, and what role universities can play in the long-term training of enterprise specialists. As a result, the paper presents an action plan that includes a description of the problem and possible solutions.*

#### **Can trainers create liminal spaces in organisations by serving coffee**

**Keywords:** Labour market & formal learning, Lifelong Learning, Organisational learning, Training and Development

**Presenting Author:**Tom De Schryver, Ministerie van Defensie - Nederlandse Defensie Academie, Netherlands

Both organizations and their staff are boundedly rational. They often make attributional mistakes in face of uncertainty and ambiguity. In order to survive in turbulent landscapes, they need each other to activate double loop learning processes in order to challenge its own assumptions, norms, and objectives. Recent theoretical insights and practical accounts from compliance trainings and HRD interventions\*, illustrate that these trainings, which consume a huge amount of resources, should and can be radically redesigned to resort effect. In order to make a lasting impact on staff and their careers, compliance trainings should become liminal spaces. In practice, designing liminality in trainings implies shifting the focus from stressing unawareness to acknowledging experience; shifting from negativity to positive contributions, from individual accountability to joint ownership; from one directional communication to meaningful dialogue; from silencing to interactive compliance programs. Just like a coffee break. We map the challenges for trainers to create liminal spaces using the variation-selection and retention scheme: How....? can trainers break the silence? · can trainers activate processes of sense-making and sense-taking between different kinds of workforce ? · can trainers manage the expectations of compliance trainings? · can trainers strike the right balance between exploration and exploitation?

#### **Getting a degree as an employee: a win win co-creation**

**Keywords:** Higher education, Labour market & formal learning, Lifelong Learning, Workplace learning

**Presenting Author:**Ellen Deprez, VIVES hogeschool, Belgium; **Co-Author:**Lisanne Blomme, VIVES University of applied sciences, Belgium; **Co-Author:**Ele Holvoet, University College VIVES, Belgium



There is a quantitative and qualitative labor shortage in various sectors in Flanders. In this ESF-project, VIVES University of Applied Sciences investigates how graduate education in co-creation with the workfield can be organized, specifically for employees who want to increase their future employability by obtaining a higher education degree in retail management or HR support. Literature refers to substantive and practical barriers to lifelong learning. Therefore a large amount of learning at the own workplace is combined with a limited number of contact moments on campus or online. By means of learning communities these two-year 'in-company' learning routes were designed in co-creation with the professional field, teacher teams and students. These in-company learning routes lead to a full degree at EQF level 5 in retail management or HR-support. It requires a mind shift for higher education institutions to develop a curriculum that meets the needs of the professional field. Co-creation, agility and flexibility are required. Marketing communication and recruitment of student employees has proven to be challenging. We formulated a number of recommendations for higher education and government that can help activate lifelong learning among employees in organizations.

#### **The Learning Lab: research and industry partnering to understand and enhance lifelong learning**

**Keywords:** Innovations in education, Training and Development, Vocational education, Workplace learning

**Presenting Author:**Stephanie MacMahon, The University of Queensland, Australia

The science of learning – bringing together the disciplines of education, psychology and neuroscience - has an integral role to play in understanding and supporting learning across the lifespan. Learning that occurs outside of formal schooling, such as Vocational Education and Training (VET), industry-based training, adult education, and professional learning, could benefit from the science of learning, which can provide important insight into evidence-informed practices and principles and how these can be mobilised into these learning and training contexts. The *Learning Lab*, situated at the University of Queensland, Brisbane, Australia, is a new research-practice innovation bringing together multi-disciplinary researchers and industry partners to collaboratively investigate learning and training needs, priorities and possibilities and to mobilise knowledge and solutions to support employees in effective learning and professional growth. The opportunity to discuss this initiative, share some of the industry-based projects, and hear from others seeking to activate lifelong learning will be valuable.

#### **Teaching and Learning Centre of the Radboud University Nijmegen, towards a learning community**

**Keywords:** Continuing professional development in Teachers, Higher education, Innovations in education, Lifelong Learning

**Presenting Author:**Marit Rensink, Radboud University Nijmegen, Netherlands; **Presenting Author:**Lia Fluit, Radboud University Medical Center, Netherlands;

**Co-Author:**Jan Bransen, Radboud University Nijmegen, Netherlands

With the Teaching and Learning Centre (TLC) the Radboud University Nijmegen aims to facilitate and stimulate learning, inspiration and collaboration between people who provide education. The goal is to improve the quality of education and stimulate teacher development by creating a platform where the dialogue with lecturers about education takes place. The TLC is focusing on three themes: education development and innovation, the continued development of the lecturer and the development of educational scholarship. For each theme there is a theme leader. They form, together with the academic leader and a coordinator, the core team of the TLC. Each faculty has two teacher ambassadors who are the linking pins between the faculties. TLC opened its doors about five weeks before the Netherlands was introduced to the corona virus. With the world reopening again new plans can be made to build the lecturer community: a discussion on possibilities how to build a network in a complex organization such as a university.

#### **Sessions B 5**

23 November 2022 13:15 - 14:45

GW11 - (-1).13

EAPRIL Spotlight Session

Lifelong learning

#### **Learning professionals; the added value of work-based learning and ongoing professionalization**

**Keywords:** Continuing professional development in Teachers, Innovations in education, Lifelong Learning, Workplace learning

**Interest group:** CLOUD 05 - HRD & Workplace learning

In this symposium we demonstrate three research-based projects on continued learning. In many societies life-long learning is an actual political and educational focal point and there is a need for professionals who can keep up with and renew their emerging profession. Recommendations on improving adult education are given by e.g. by Eijl & Klanderman (2005) who plea for an approach of adult learners based on equality. In the Netherlands, the ministerial committee Rinnooy Kan (2014) substantiated the importance of life-long learning and e.g. HAN UAS invested on the development of flexible education for professionals (HAN, 2014). Besides a significant improvement of the quality of part time HE, new collaborations between employers and educational institutes on ongoing professionalization of their employees were explored. Practitioner research that underpins these initiatives reveals factors for success. In this symposium the following research-based projects are presented: · 'Learning by seeing': Action-based professionalization of public services· Teachers' ongoing assessment literacy in higher education · Adapt at Work: the development of adaptive expertise in work-based contexts The presenters will outline and compare key factors of their practices. Interactivity is guaranteed by making cross-overs between the projects and the fields of expertise of the public.

#### **Learning professionals; the added value of work-based learning and ongoing professionalization**

**Presenting Author:**Lotte Bus, HAN University of Applied Sciences, Netherlands; **Presenting Author:**Mechteld Lengkeek, Hogeschool van Arnhem en Nijmegen (HAN), Netherlands; **Presenting Author:**Linda Jakobs, HAN University of Applied Sciences (UAS), Netherlands; **Presenting Author:**Wietske Kuijer-Siebelink, HAN University of Applied Sciences, Netherlands; **Co-Author:**Lineke van Hal, HAN University of Applied Sciences (UAS), Netherlands; **Co-Author:**Tamara van Schilt, Hogeschool van Arnhem en Nijmegen/HAN University, Netherlands

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#### **Sessions B 6**

23 November 2022 13:15 - 14:45

GW11 - (1).09

Present & Discuss

Primary education

#### **Education for All**

**Keywords:** Beliefs and conceptions of teaching, Distance Education, Educational Policy, Equality / Education for All, Inclusivity, Primary school education, Professional identity, STEM, Work environments

**Interest group:** CLOUD 04 - Improving learning and well-being, CLOUD 08 - Diversity & equality in different contexts

**Chairperson:** Annegien Langeloo, Hanze University of Applied Sciences, Netherlands

### **The emerging role of the Remote Education Tutor from Occupational (In)visibility**

**Keywords:** Distance Education, Equality / Education for All, Professional identity, Work environments

**Presenting Author:** Karen Peel, University of Southern Queensland, Australia

Abstract: Remote Education Tutors (RETs) are central to the delivery of distance schooling in Australia and are accountable for the face-to-face supervision and educational support of students. This presentation highlights the significance of the research that acknowledges the work of RETs in this often-overlooked occupation, asking the question: Who represent the RET workforce in Australia and what impact does the remote education tutoring experience have on personal lifestyles and professional work in the distance education context? Statistical data were collected from a national survey (N = 575) that was designed to map the personal and professional perceptions of Australian RETs. These data underwent descriptive analysis with the findings confirming that the RET acts as a conduit between the distance schooling teacher and the student, and that this role requires complex capabilities to be performed within a structured framework. Time constraints with competing demands present the constant challenge to the RETs' work satisfaction. Constraining this occupation is the reality that there is no formal qualification available for RETs in Australia. Without specific credentialing, it appears the (in)visible role of the RET risks being overlooked as a substantive educational occupation.

### **STEM teachers vs “troublemaker” students: A view beyond classroom management**

**Keywords:** Beliefs and conceptions of teaching, Equality / Education for All, Inclusivity, STEM

**Presenting Author:** Alexander Koch, University of Teacher Education Fribourg, Switzerland

A “Troublemaker” student is often defined as one “whose conduct is consistently at odds with normal school discipline”. However, not all researchers deem troublemaking behaviors as bad. A more humanistic definition describes “troublemakers” as canary in a cage believing that they are students who explore the free mind and want to develop themselves in different ways. Yet, little research has been conducted on this phenomenon. In our research study, we adopt a positive psychology perspective grounded in asset-based pedagogical frameworks and ask for a typology of “troublemakers” from a teacher’s perspective. In a qualitative research design we conducted semi-structured interviews with six individual teachers to explore the phenomenon of “troublemakers”. Teachers hold common and shared conceptions of troublemakers, their beliefs are fairly strong, and there is a discrepancy about valued attributes of STEM and attributes of troublemakers. Teachers showed positive and negative expectations of “troublemaker” success in STEM. The variation may be explained by their teaching experience, pedagogical attitudes, humanistic values and attribution of success. The attribution of success also seems to relate with the stability of being a “troublemaker” as a stable and trait-like characteristic they assigned to their students correlated with learning processes and not with teaching processes.

### **Equity, Equality, and Need: A Qualitative Study into Teachers’ Professional Trade-Offs**

**Keywords:** Beliefs and conceptions of teaching, Educational Policy, Equality / Education for All, Primary school education

**Presenting Author:** Marijke Van Vijfeijken, HAN University of Applied Sciences, Netherlands; **Co-Author:** Eddie Denessen, Radboud University Nijmegen, Behavioural Science Institute, Netherlands; **Co-Author:** Tamara van Schilt-Mol, Hogeschool van Arnhem en Nijmegen, Netherlands; **Co-Author:** Ron Scholte, Behavioural Science Institute, Radboud University Nijmegen, Netherlands

This presentation reports on the findings of a qualitative study of 15 primary school teachers' differentiation beliefs which were assessed against principles of distributive justice. The study was performed to examine with which beliefs about justice teachers legitimize their choices regarding differentiation. We used justice principles (equity, equality, and need) as themes to describe and analyze teachers' arguments. By doing so, we gained more insight into what teachers consider to be fair in the distribution of educational resources. Consistent with our expectations, teachers simultaneously reason from different distributive justice principles to account for their beliefs. Findings demonstrate that the equity principle combined with the equality principle of equal distribution of educational resources dominated teachers' beliefs about differentiation. In their practice, however, teachers perceive an educational support dilemma with a desire to distribute time and support equally among students on the one hand and an urge to provide more time and support for students who are in need on the other hand. The principles of distributive justice may be useful for teachers to reflect on their choices about distributing educational resources and to discuss and align this with colleagues or other stakeholders.

### **Sessions B 7**

23 November 2022 13:15 - 14:45

GW11 - (0).11

Present & Discuss

Higher education, Primary education, Workplace learning

### **Leadership & Policy in Education**

**Keywords:** Educational Policy, Higher education, Leadership development, Primary school education, Professional Development, Professionalisation of educators, School Development, Self-regulation and self-regulated learning, Workplace learning

**Interest group:** CLOUD 03 - Strategies to improve teaching and learning environments, CLOUD 12 - Leadership in Education

**Chairperson:** Miranda de Hei, The Hague University of Applied Sciences, Netherlands

### **Developing schools as professional learning communities: school leaders’ interventions.**

**Keywords:** Leadership development, Primary school education, Professional Development, School Development

**Presenting Author:** Marlon van de Put, Fontys Hogeschool Kind & Educatie, Netherlands; **Co-Author:** Anje Ros, Fontys University of Applied Sciences, Netherlands; **Co-Author:** Marjan Vermeulen, Heerlen Open Universiteit, Netherlands

School leaders play a crucial role in developing schools as professional learning communities (PLCs). However, knowledge about school leaders' interventions to enhance the PLCs development is scarce. The assumption is that interventions should reflect teachers needs and may change as the school grows into a next stage of PLC development. Therefore our study aims to answer the following research question: *Which school leaders' interventions enhance PLC development in different stages and how are these interventions perceived by teachers?* Data have been collected through semi-structured interviews with 18 school leaders and 53 teachers of Dutch primary schools. Results indicate that school leaders use a broad diversity of interventions to stimulate PLC development. Also the developmental stages in schools appear to affect school leaders interventions. In initial stages, interventions seem to be more focused on delegating tasks and conditional structures from a central leadership position. In more advanced stages, interventions are more often focused on mentoring teachers form a distributed leadership perspective. Not all school leaders appear to have a good grasp of the specific needs of teachers during PLC development. These results offer school leaders practical information on effectively leading PLC development.

### **Developing Inclusive leadership: a solicited diary study of school leaders and childcare leaders**

**Keywords:** Leadership development, Professional Development, Self-regulation and self-regulated learning, Workplace learning

**Presenting Author:** Rachel Verheijen-Tiemstra, Fontys University of Applied Sciences, Netherlands; **Co-Author:** Anje Ros, Fontys University of Applied Sciences, Netherlands; **Co-Author:** Marc Vermeulen, Tilburg University, Netherlands; **Co-Author:** Rob Poell, Tilburg University, Netherlands

Interprofessional collaboration (IPC) between the fields of primary education and child care services (day care, pre-schooling and out-of-school-care) is nowadays held to be essential in order to create alignment in pedagogical and learning pathways. As a result, more and more childcentres are being created where teachers and childcare workers are expected to work together. Yet, little is known about how childcare leaders and school leaders together seek to enhance IPC between childcare workers and school teachers. Inclusive leadership is an appropriate leadership style in contexts when team members are diverse and status differences among team members occur. Our study aims to answer the following research question: *“How did school leaders and childcare leaders develop their inclusive leadership behaviours in the workplace during the duration of the PDP?”* Data have been gathered through a solicited diary

research method in which 17 school leaders and childcare leaders of 8 child centres who followed a Professional Development Program (PDP) on inclusive leadership development described their development. Results indicate that participants described more learning notes on 'facilitating belongingness' and 'role model behaviour in belongingness' in comparison with valuing uniqueness.

#### **An Academic Integrity Awareness Campaign Across a University (CANCELLED)**

**Keywords:** Educational Policy, Higher education, Professional Development, Professionalisation of educators

**Presenting Author:**Gillian Lake, DCU, Ireland; **Co-Author:**Fiona O Riordan, Dublin City University, Ireland

This presentation shares preliminary findings from a study initiated by Dublin City University (DCU) which sought to raise institution-wide awareness of academic integrity. The campaign builds on targeted work to promote academic integrity that was led by the university's Teaching Enhancement Unit (TEU) since 2018. The study aims to build awareness through data collection and dissemination across all DCU stakeholder groups. It is intended that the findings will inform a more strategic approach to promoting academic integrity whereby all in the university contributed to, and are part of, the ongoing work of upholding and sustaining the integrity of DCU. The research project runs over two phases. Phase one was completed in December 2021 and involved quantitative analysis of student and staff online questionnaires. During February 2022 preliminary findings were disseminated across the university by way of focused conversations. This built capacity and informed phase two. Phase two involved focus group discussions with staff and students in March/April 2022. Preliminary findings from both phases will be presented for discussion at this conference. In addition we are interested to discuss the research approach in terms of its ability to raise awareness of academic integrity across the university.

#### **Sessions B 8**

23 November 2022 13:15 - 14:45

GWW1 - (0).08

Present & Discuss

Primary education

#### **Primary School Education**

**Keywords:** Collaborative Learning, Continuing professional development in Teachers, Primary school education, Professional Development, Professionalisation of educators, Research-based learning

**Interest group:** CLOUD 01 - Teacher education

**Chairperson:** Mijke Hartendorp, Saxion University of Applied Sciences, Netherlands

#### **Lessons learned in piloting Lesson Study for behavior**

**Keywords:** Collaborative Learning, Primary school education, Professional Development, Research-based learning

**Presenting Author:**Monique Nelen, Windesheim University of Applied Sciences, Netherlands; **Co-Author:**Joke Kamstra, Windesheim University of Applied Sciences, Netherlands; **Co-Author:**Anita Blonk, Gagelhoeve, Netherlands; **Co-Author:**Martijn Willemse, Windesheim University of applied sciences, Netherlands; **Co-Author:**Sui Lin Goei, Windesheim University of Applied Sciences, Netherlands

From time to time, every teacher struggles with behavioral issues in his classroom such as students not following instructions or students not ready to learn. In this research project, we formed small professional learning communities of teachers cooperating in developing behavioral interventions for their classroom following the Lesson Study (LS) approach. In a LS cycle, small groups of teachers systematically prepare, teach and observe, evaluate, and refine so-called research lessons. Usually, LS is deployed to address didactical issues. In this project we piloted the LS approach to support teachers in dealing with behavioral issues (LS-B). In this design-oriented research seven primary schools, working with School-Wide Positive Behavior Support (SWPBS) participated. Research questions were: 1) How can participating in LS-B contribute to supporting teachers in feeling more competent in dealing with problem behavior in their classroom? 2) In what way does participation in LS-B contribute to strengthen the school culture? Data collection consisted of semi-structured individual interviews with both participating teachers and principals, and analyses of conversations during LS-B meetings (so called teacher talk). Preliminary results indicate that teachers struggle with transitions between lessons. Collaboratively analyzing video recordings of behavior lessons seems to increase teachers' awareness of their actions towards students.

#### **Conducting a professional dialogue by teachers who design making lessons in a Lesson Study**

**Keywords:** Continuing professional development in Teachers, Primary school education, Professional Development, Professionalisation of educators

**Presenting Author:**Sui Lin Goei, Windesheim University of Applied Sciences, Netherlands; **Co-Author:**Geert Holwerda, Windesheim University of Applied Sciences, Netherlands; **Co-Author:**Gülçin Bayindir, KBS De Boxem, Zwolle, Netherlands

Excellent schools in the Netherlands make a difference with effective teacher teams, capable in designing education and practice continuous professionalization. An effective way of professionalization is Lesson Study (LS). This is a professionalization approach in which teams of teachers prepare, design, develop, enact these lessons, reflect on it, redesign it. This process may be repeated. The professional dialogue of the involved teachers plays a crucial role. Teachers are more able to make connections between their expertise and the effective teaching of this subject. In this presentation we will describe a small funded project in which teachers of "De Boxem", a primary school in Zwolle, the Netherlands, develop lessons via LS with a focus on improving professional dialogue. The context of the lessons is maker education. Through a design-oriented research participants focus on this research question: *'How do teachers of 'De Boxem' conduct a professional dialogue within a LS, in which they design challenging making lessons for their pupils?'* The researchers' focus is on the professional dialogue during LS-design meetings. Preliminary results show that the teacher talk of participating teachers improved. During the closing phase of the lesson cycle, the teachers became less critical about the subject during their teacher talk.

#### **Sessions B 9**

23 November 2022 13:15 - 14:45

GWW1 - (1).10

Present & Discuss

Higher education, Secondary education

#### **Assessment & Teaching Approaches**

**Keywords:** Assessment and evaluation, Beliefs and conceptions of learning, Higher education, Instructional Design and Instructional Strategies, Peer Interaction / learning, Secondary school education, Teaching approaches, Writing

**Interest group:** CLOUD 10 - Assessment & Evaluation

**Chairperson:** Linda van den Bergh, Netherlands

#### **Writing Assessment Through the Lens of Feedback Literacy: A Systematic Review**

**Keywords:** Assessment and evaluation, Peer Interaction / learning, Teaching approaches, Writing

**Presenting Author:**Abderrahim Mamad, University of Szeged, Doctoral School of Education, Hungary; **Co-Author:**Tibor Vigh, University of Szeged, Hungary

Recently developed feedback literacy (FL) frameworks in education have been interpreted in and adapted to the context of writing, but their empirical validation is limited. In recent years, some related empirical studies have been published, and synthesizing them could pave the way for future studies. Therefore, the purpose was to identify studies examining teacher and student FL in EFL, L2, and academic writing since 2018, describe their characteristics, summarize their findings, and formulate recommendations. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) protocol was used. Electronic searches were performed across Scopus and EBSCOhost. Two researchers retrieved, screened, and assessed the articles for eligibility. The results were

synthesized using a descriptive analysis of 16 articles that met the inclusion criteria. Most studies focused on how students appreciate feedback in improving their writing and making judgments rather than how they manage affect and act upon feedback. Limited research addressed the way teachers design and formulate their feedback to support students' receipt and provision of it. This review suggests that future research should have a strong theoretical basis to investigate the impact of FL on student writing development not only in higher education but also in elementary, secondary, and postgraduate education.

#### **Programmatic assessment in eight different domains in higher professional education**

**Keywords:** Assessment and evaluation, Beliefs and conceptions of learning, Higher education, Teaching approaches

**Presenting Author:**Tamara van Schilt-Mol, Hogeschool van Arnhem en Nijmegen, Netherlands; **Presenting Author:**Liesbeth Baartman, University of Applied Sciences Utrecht, Netherlands

In programmatic assessment, an arrangement of different assessment methods is deliberately designed across the entire curriculum, combined and planned to support both robust (summative) decision-making and (formative) student learning. Evidence of the value of programmatic assessment is emerging, but strongly focuses on the medical domain. In this study, we focused on programmatic assessment in bachelor/master courses outside the medical domain. Interviews were conducted with teachers/curriculum designers of eight different courses. We focused on: (1) reasons to implement programmatic assessment, (2) the design and implementation process, (3) characteristics of curriculum/assessment, and (4) teacher and student experiences. Within case and cross case analysis showed similarities and differences. For all cases, programmatic assessment was not the starting point, but fitted views on what is important in learning and work. The theoretical principles of programmatic assessment resulted in different assessment designs, all centered around a portfolio and a "backbone" of learning outcomes. Student and teacher experiences seem largely positive: students focus on feedback and show more self-regulation. In the implementation process, training for teachers and students in giving and receiving feedback, and addressing current "summative views" on assessment seem important.

#### **Design principles for a formative assessment plan**

**Keywords:** Assessment and evaluation, Instructional Design and Instructional Strategies, Secondary school education, Teaching approaches

**Presenting Author:**Janneke Van Der Steen, HAN University of Applied Sciences, Netherlands; **Co-Author:**Tamara van Schilt-Mol, Hogeschool van Arnhem en Nijmegen, Netherlands; **Co-Author:**Cees van der Vleuten, Maastricht University, Netherlands; **Co-Author:**Desirée Joosten-ten Brinke, Open University of the Netherlands, Netherlands

Implementing formative assessment in schools is not easy. Teachers state they feel capable of carrying out different formative learning activities in their classrooms. However they do not know how to reach enough consistency in combinations of these activities to let them jointly support learning. While there are a lot of tools for developing formative assessment activities in classrooms there are little guidelines for teachers to help them to tie these different activities together in a program. Therefore this study aimed to formulate design principles to develop formative assessment programs by starting off with expert interviews leading to a set of ten design principles. This first set was validated through focusgroups with teachers from four schools for secondary education. The teachers were questioned about the expected validity, transparency, usability, completeness and suitability of the design principles for school practice. Results show that the design principles are especially suitable for expert teachers in formative assessment. Therefore the design principles should be integrated in a more practical tool to make it valuable for all teachers. Eight design principles for formative assessment programs were determined as the starting point of such a tool.

#### **Sessions B 10**

23 November 2022 13:15 - 14:45

GWW1 - (-1).14

Workshop

Higher education

#### **Blended, not stirred! Designing new places and times of learning**

**Keywords:** Blended learning, Educational Technology, Higher education, Self-regulation and self-regulated learning

**Interest group:** CLOUD 06 - Learning in Digital Era: Technology Enhanced Learning

Blended learning has become the standard in higher education – more prominently so after the period of distance learning (Dragt et al., 2021). The alternation between face-to-face and online learning activities that is at the core of blended learning (Hrastinski, 2019) requires higher education institutes to consider what makes this alternation or blend meaningful for a certain educational context (McKenna et al., 2020). At Iselinge Hogeschool, we combined focus groups and literature review to arrive at a set of five design principles for a blended teacher training curriculum. In order to make these principles actionable, we designed the Blended Learning Card Set for teacher trainers. This card set helps teacher trainers and other curriculum designers give shape to a well-considered blended curriculum. The proposed workshop will first (re)acquaint participants with blended learning by briefly shedding light on the design principles gleaned from literature and practice. Subsequently, participants will engage in designing a blended curriculum by means of the Blended Learning Card Set, which will enable them to think about blending in more ways than one. It is the aim of the workshop to discuss good practices in blended curriculum design and to demonstrate the accessibility of blended learning.

#### **Blended, not stirred! Designing new places and times of learning**

**Presenting Author:**Nienke Reessink, Iselinge Hogeschool, Netherlands; **Presenting Author:**Bram Oonk, Iselinge Hogeschool, Netherlands; **Co-Author:**Rosanne Hebing, Iselinge Hogeschool, Netherlands

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#### **Sessions B 11**

23 November 2022 13:15 - 14:45

GWW1 - (0).10

Case study

Lifelong learning

#### **Lifelong Learning in Higher Education**

**Keywords:** Assessment and evaluation, Higher education, Innovations in education, Lifelong Learning, Mathematics Education, Professionalisation of educators

**Interest group:** CLOUD 02 - Educators' professional development, CLOUD 10 - Assessment & Evaluation

**Chairperson:** Emmanuel Manalo, Kyoto University, Japan

#### **Professionalizing primary school mathematics teacher educators**

**Keywords:** Higher education, Lifelong Learning, Mathematics Education, Professionalisation of educators

**Presenting Author:**Ronald Keijzer, Hogeschool IPABO Amsterdam/Alkmaar, Netherlands; **Presenting Author:**Michiel Veldhuis, Hogeschool IPABO

Amsterdam/Alkmaar, Netherlands; **Co-Author:**Marjolein Kool, Hogeschool Utrecht, Netherlands; **Co-Author:**Sonja Stuber, Hogeschool IPABO Amsterdam/Alkmaar, Netherlands; **Co-Author:**Jus Roelofs, Marnix Academie, university of applied sciences, Utrecht, Netherlands

Teaching mathematics in primary school teacher education requires a broad set of specific skills and knowledge. No formal education exists in the Netherlands to prepare starting teacher educators for this task. As a result, starting they generally are not fully prepared for their new task. In order to professionalize starting teacher educators, we (experienced researchers and mathematics teacher educators) developed a course (ten full days over a two-year period). Design principles for this course included (1) focus on mathematical knowledge for teaching, (2) connection with starting teacher educators' practice and primary school, (3) learning from and with peers, and (4) practice-based research as a developmental tool. Fifteen mathematics teacher educators from different institutes from all over the Netherlands participated. They worked co-operatively on various aspects of mathematics education relevant for their teaching in teacher education. Their work in the course resulted in practice-based research in their own teacher education institute. Results of these research projects will soon be presented at one of the teacher education conferences in the Netherlands or published in a journal. Participants developed as professionals, participated in the mathematics teacher educators' networks in the Netherlands, and created a new network for peer consultation in the future.

#### **Alternative ways of assessment to make part-time education more flexible**

**Keywords:** Assessment and evaluation, Higher education, Innovations in education, Lifelong Learning

**Presenting Author:**Anne Lohuis, Saxion University of Applied Sciences, Netherlands; **Presenting Author:**Lynn Takken-Buschers, Saxion University of Applied Sciences, Netherlands

Saxion Parttime School (SPS) is the department of part-time education at Saxion University of Applied Sciences. SPS is participating in de national flexibilization pilot. The pilots are experiments designed to provide greater flexibility in higher education. SPS offers students that flexibility, among other things, by giving them various options to demonstrate the learning outcomes. An example of this is the validation of prior (work-)experience. It is also possible for students to complete a course independently without attending the meetings. SPS is currently taking further steps to make their education and assessment even more flexible. It wants to offer students more alternatives to create their own learning path, reduce study load and to complete the study faster. One of those next steps is the holistic assessment of multiple coherent learning outcomes at once. Another one is validation of work experience during the study, in addition to validation work experience before the start of the study. We will share our experience about the implementation and evaluation of our alternative ways to demonstrate the learning outcomes. We present our next steps, including all the challenges this entails.

#### **Sessions C 1**

23 November 2022 15:15 - 16:45

GWW1 - (1).09

EAPRIL Cloud Spotlight Session

#### **CLOUD 4 - Hands-on experience in awareness-based innovation for learner & teacher wellbeing**

**Keywords:** 21st century learning, Creativity, Innovations in education, Well-being and engagement

**Interest group:** CLOUD 04 - Improving learning and well-being

Cloud 4 was created in 2016 in response to a call for learning to evolve for the wellbeing of all. One way in which this can be done is through education as it indeed touches almost daily everyone of all ages the world throughout, and this in both formal and continuous learning. In order to achieve this, however, education itself needs to evolve through profound renewal towards learner-centric, cocreative and innovation driven learning. We have seen in the past few years that we are all able to innovate quickly, efficiently and most often in collaboration with others. In this Spotlight session the participants will explore, hands-on, in-depth innovation in education, the result of which will provide a starting point for change in practice, of interest to all those involved.

#### **CLOUD 4 - Hands-on experience in awareness-based innovation for learner & teacher wellbeing**

**Presenting Author:**Els Laenens, University of Antwerp, Belgium; **Presenting Author:**Zarina M. Charlesworth, University of Applied Sciences & Arts Western Switzerland // HES-SO, Switzerland

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#### **Sessions C 2**

23 November 2022 15:15 - 16:45

GWW1 - (0).11

EAPRIL Cloud Spotlight Session

Vocational education

#### **CLOUD 8 - The barriers students in higher education face in lifelong learning**

**Keywords:** Higher education, Lifelong Learning, Professional Development, Workforce diversity & equality

**Interest group:** CLOUD 08 - Diversity & equality in different contexts

Over the last 50 years, lifelong learning has been seen as a way to empower learning outside of school, however, even higher education students who supposedly have self-regulation skills may not be aware of the possibilities or may be limited by their own circumstances. The purpose of this paper is therefore to explore the capacity of university students to access information by analysing their lifelong learning needs and tools they use. Interviews and diaries are used as data collection instruments in this qualitative study and are analysed using content analysis. Semi-structured interviews were conducted online with eight higher education students exploring their ideas about lifelong learning, tools they use and the challenges they face. The participants also kept a diary for two weeks about their self-regulated learning. The findings suggest that some participants are not aware of the opportunities they have for lifelong learning and do not use those opportunities to improve themselves professionally. They also report that they use the internet for lifelong learning, although with some limitations, such as limited resources and difficulties in accessing the information.

#### **CLOUD 8 - The barriers students in higher education face in lifelong learning**

**Presenting Author:**Sibel Inci, Kocaeli University, Turkey

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#### **Sessions C 3**

### **Thematic Track (CLOUD 14): How to activate lifelong learning among employees in organizations (2)**

**Keywords:** Continuing professional development in Teachers, Corporate learning, Creativity, Higher education, Innovations in education, Knowledge Building and Development, Labour market & formal learning, Lifelong Learning, Organisational learning, Training and Development, Vocational education, Workplace learning

**Interest group:** CLOUD 05 - HRD & Workplace learning, CLOUD 12 - Leadership in Education, CLOUD 14 - The incubator cloud for organisational learning ideas

#### **Can trainers create liminal spaces in organisations by serving coffee (2)**

**Keywords:** Labour market & formal learning, Lifelong Learning, Organisational learning, Training and Development

**Presenting Author:** Tom De Schryver, Ministerie van Defensie - Nederlandse Defensie Academie, Netherlands

Both organizations and their staff are boundedly rational. They often make attributional mistakes in face of uncertainty and ambiguity. In order to survive in turbulent landscapes, they need each other to activate double loop learning processes in order to challenge its own assumptions, norms, and objectives. Recent theoretical insights and practical accounts from compliance trainings and HRD interventions\*, illustrate that these trainings, which consume a huge amount of resources, should and can be radically redesigned to resort effect. In order to make a lasting impact on staff and their careers, compliance trainings should become liminal spaces. In practice, designing liminality in trainings implies shifting the focus from stressing unawareness to acknowledging experience; shifting from negativity to positive contributions, from individual accountability to joint ownership; from one directional communication to meaningful dialogue; from silencing to interactive compliance programs. Just like a coffee break. We map the challenges for trainers to create liminal spaces using the variation-selection and retention scheme: How.... can trainers break the silence? can trainers activate processes of sense-making and sense-taking between different kinds of workforce? can trainers manage the expectations of compliance trainings? can trainers strike the right balance between exploration and exploitation?

#### **The Learning Lab: research and industry partnering to understand and enhance lifelong learning (2)**

**Keywords:** Innovations in education, Training and Development, Vocational education, Workplace learning

**Presenting Author:** Stephanie MacMahon, The University of Queensland, Australia

The science of learning – bringing together the disciplines of education, psychology and neuroscience - has an integral role to play in understanding and supporting learning across the lifespan. Learning that occurs outside of formal schooling, such as Vocational Education and Training (VET), industry-based training, adult education, and professional learning, could benefit from the science of learning, which can provide important insight into evidence-informed practices and principles and how these can be mobilised into these learning and training contexts. The *Learning Lab*, situated at the University of Queensland, Brisbane, Australia, is a new research-practice innovation bringing together multi-disciplinary researchers and industry partners to collaboratively investigate learning and training needs, priorities and possibilities and to mobilise knowledge and solutions to support employees in effective learning and professional growth. The opportunity to discuss this initiative, share some of the industry-based projects, and hear from others seeking to activate lifelong learning will be valuable.

#### **Teaching and Learning Centre of the Radboud University Nijmegen, towards a learning community (2)**

**Keywords:** Continuing professional development in Teachers, Higher education, Innovations in education, Lifelong Learning

**Presenting Author:** Marit Rensink, Radboud University Nijmegen, Netherlands; **Presenting Author:** Lia Fluit, Radboud University Medical Center, Netherlands;

**Co-Author:** Jan Bransen, Radboud University Nijmegen, Netherlands

With the Teaching and Learning Centre (TLC) the Radboud University Nijmegen aims to facilitate and stimulate learning, inspiration and collaboration between people who provide education. The goal is to improve the quality of education and stimulate teacher development by creating a platform where the dialogue with lecturers about education takes place. The TLC is focusing on three themes: education development and innovation, the continued development of the lecturer and the development of educational scholarship. For each theme there is a theme leader. They form, together with the academic leader and a coordinator, the core team of the TLC. Each faculty has two teacher ambassadors who are the linking pins between the faculties. TLC opened its doors about five weeks before the Netherlands was introduced to the corona virus. With the world reopening again new plans can be made to build the lecturer community: a discussion on possibilities how to build a network in a complex organization such as a university.

#### **Scaling up innovation while retaining 'the spark': a case study of three innovative practices (2)**

**Keywords:** Corporate learning, Creativity, Organisational learning, Workplace learning

**Presenting Author:** Suzanne Verdonshot, Kessels & Smit, The Learning Company, Netherlands

Social innovations typically start with an intricate or urgent question, for which the people involved aim to find new ways of working. The process of innovation can be seen as a learning process that takes place in practice, and is therefore rather bumpy. People involved can make progress by conducting small experiments, or pilot projects that may lead to breakthroughs in one group, team, or department. The present study investigates how innovation practices can surpass this experimental stage and scale up towards more widespread innovation, while at the same time retaining the 'spark' that is often felt in the early stages. The method is a case study consisting of three innovation practices. In total, 18 interviews have been done. The analysis shows that in order to scale up innovation it is important to relate very concrete situations ('zoom in') to the bigger ambition that is strived for ('zoom out'). Scaling up successfully while retaining the spark is done step by step. Small steps that contribute to scaling up ('micro-moves') lead the innovation in the direction of the desired image in the future, and at the same time realize progress in the present.

#### **Getting a degree as an employee: a win win co-creation (2)**

**Keywords:** Higher education, Labour market & formal learning, Lifelong Learning, Workplace learning

**Presenting Author:** Ellen Deprez, VIVES hogeschool, Belgium; **Co-Author:** Lisanne Blomme, VIVES University of applied sciences, Belgium; **Co-Author:** Ele Holvoet, University College VIVES, Belgium

There is a quantitative and qualitative labor shortage in various sectors in Flanders. In this ESF-project, VIVES University of Applied Sciences investigates how graduate education in co-creation with the workforce can be organized, specifically for employees who want to increase their future employability by obtaining a higher education degree in retail management or HR support. Literature refers to substantive and practical barriers to lifelong learning. Therefore a large amount of learning at the own workplace is combined with a limited number of contact moments on campus or online. By means of learning communities these two-year 'in-company' learning routes were designed in co-creation with the professional field, teacher teams and students. These in-company learning routes lead to a full degree at EQF level 5 in retail management or HR-support. It requires a mind shift for higher education institutions to develop a curriculum that meets the needs of the professional field. Co-creation, agility and flexibility are required. Marketing communication and recruitment of student employees has proven to be challenging. We formulated a number of recommendations for higher education and government that can help activate lifelong learning among employees in organizations.

#### **Designing and implementing interventions that facilitate self-directed learning in the workplace.(2)**

**Keywords:** Corporate learning, Knowledge Building and Development, Lifelong Learning, Workplace learning

**Presenting Author:** Anna van der Horst, Justus Liebig University Giessen Germany, Eelloo Netherlands, Netherlands

Careers are becoming more flexible. Employees must continuously prepare for change to stay in control (Savickas, 2013). Therefore, L&D professionals are looking for ways to facilitate lifelong and self-directed learning in organizations. Too often learning interventions are a great start, but do not translate into lasting

effects. In this study I tried to find out what initiates and facilitates self-directed learning in practice and how L&D professionals can contribute to the success of a learning intervention. I conducted a qualitative study using the positive deviance (PD) approach (Singhal & Svenkerud, 2019). This approach identifies what is going right to amplify it, as opposed to focusing on what is going wrong. It also encourages people to gain firsthand knowledge, because knowledge people gather themselves has a much greater impact than knowledge they gain from others (Kessels, 2005). In this study 15 structured interviews with L&D consultants on their successful experiences with initiating self-directed learning in organizations, were analyzed by a group of colleagues (L&D professionals). This resulted in six principles for self-directed learning and six success factors for implementing such interventions. The principles and success factors are intended to help L&D professionals design and implement interventions that really contribute to continuous learning in organizations.

#### **LIFELONG LEARNING: COOPERATION WITHIN ENGINEERING EDUCATION AND INDUSTRY (2)**

**Keywords:** Corporate learning, Higher education, Lifelong Learning, Workplace learning

**Presenting Author:**Liudmila Bolsunovskaya, National Research Tomsk Polytechnic University, Russian Federation

*The trend of lifelong learning is becoming the main unifying feature of education around the world. Large-scale social and economic changes and the development of technologies have become a catalyst and drivers for the evolution of this trend. To meet society's challenges the successful future engineer should be ready to study throughout their whole life. The article analyses several key elements of current Russian policy in terms of their potential contribution to the fostering of a learning culture, seen as a support for lifelong learning. The purpose of this research is to provide a summary of the evidence related to issues associated with the definition of lifelong learning and to present the results of the survey concerning different options of lifelong learning for industries' staff. According to the survey among graduates working in the industries' plants it was defined which types of lifelong learning can be provided by Vocational Education. The paper also reviews existing barriers and explores how to boost participation industries in the university educational process, and what role universities can play in the long-term training of enterprise specialists. As a result, the paper presents an action plan that includes a description of the problem and possible solutions.*

#### **Sessions C 4**

23 November 2022 15:15 - 16:45

GWW1 - (1).20

Workshop

Higher education

#### **BRIDGING THE GAP BETWEEN SCHOOL SCIENCE AND LABORATORY SCIENCE WITH HIGH-TECH INSTRUMENTS**

**Keywords:** Artificial intelligence, Lifelong Learning, Motivation, Workplace learning

**Interest group:** CLOUD 06 - Learning in Digital Era: Technology Enhanced Learning

Digitalisation, artificial intelligence (AI) and digitality are janus-faced. Digitalisation or AI makes life easier through "convenience", enables freedom, increases productivity and frees us from the tedium of work, some say. It replaces things with ephemeral, atomised information that erodes truth and reality and thus displaces knowledge, experience and insight through the flow of information, say others. The advantages and dangers of digitalisation, AI and digitality are undisputed. The goal must be to use these and minimise disadvantages. This is best done by delving into their nature. And this as early as possible and directly at school. Simply flooding classrooms with electronic media is not sufficient. The Berzelius project bridges the gap between school science and lab science by offering students a high-tech instrument park for discovering the world by collecting and interpreting data.

In this workshop, participants cruise through three high-tech instrument stations to ask nature questions through experimentation that the instruments will then answer in data form. Multimedia lab journals and a member of the Berzelius team support the participants. Afterwards, we discuss the participants' experiences against the background of digitalization and AI and discuss how the project can be scientifically monitored and implemented in everyday school life.

#### **BRIDGING THE GAP BETWEEN SCHOOL SCIENCE AND LABORATORY SCIENCE WITH HIGH-TECH INSTRUMENTS**

**Presenting Author:**Alfred Steinbach, University of Teacher Education St.Gallen (PHSG), Institute of Mathematics, Science and Technology Education, Switzerland; **Co-Author:**Dominik Tschirky, University of Teacher Education St.Gallen (PHSG), Institute of Mathematics, Science and Technology Education, Switzerland; **Co-Author:**Nicolas Robin, Fachdidaktik Naturwissenschaften, Switzerland

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#### **Sessions C 5**

23 November 2022 15:15 - 16:45

GWW1 - (-1).13

Workshop

Lifelong learning

#### **Designing for future-oriented education in Knowledge Labs: a practical method**

**Keywords:** Collaborative Learning, Continuing professional development in Teachers, Professional Development, School Development

**Interest group:** CLOUD 02 - Educators' professional development

Schools, teacher education and researchers are increasingly collaborating in professional learning networks to find solutions for complex issues in teaching practise. The Sprong-Voorwaarts (Jump-Forward) network in the Netherlands is an example of such a network. This network aims for finding possible solutions for future challenges in four fields of interest (1) changing teacher behaviour, (2) changing teacher identity, (3) changing leadership and (4) changing organisations, all with regard to the future-oriented education. In total, 13 partner organizations participate in the network varying from primary and secondary schools, teacher education institutes and an academy for community and talent (ACT). The network initiated so called 'Knowledge Labs' to support co-creation between the partners on topics related to the fields of interest. To support the co-creation process and the design of evidence-informed tools in the Knowledge Labs, a method was designed. This method was based on design thinking, scrum and networked learning elements. In this workshop participants are introduced into this method, apply the method on a future learning issue and discuss (elements of) the method in small groups. As a result participants gain insight into the working principles of the method and provide feedback for further use and quality improvement.

#### **Designing for future-oriented education in Knowledge Labs: a practical method**

**Presenting Author:**Henderijn Heldens, Fontys University of Applied Science, Netherlands; **Co-Author:**Quinta Kools, Fontys Hogescholen, Netherlands; **Co-Author:**Helma Oolbekkink, HAN University of Applied Sciences, Netherlands; **Co-Author:**Anje Ros, Fontys University of Applied Sciences, Netherlands

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#### Sessions C 6

23 November 2022 15:15 - 16:45

GWW1 - (0).37

Workshop

Secondary education

##### **Creating impact in schools: using knowledge in and from practice-based research projects**

**Keywords:** Continuing professional development in Teachers, Knowledge Building and Development, Organisation of educational research, Research-based learning

**Interest group:** CLOUD 07 - Research impact on school development

In this workshop, we will address the challenges researchers and practitioners have to use research knowledge in educational practice. In order to create impact in schools both researchers and practitioners should be aware of opportunities to use and transfer knowledge, already from the start of a research project. The aim of this session is to activate researchers and practitioners to think of ways of enhancing the impact of their own practice-based research. In this workshop, we will apply the jigsaw method: participants attend one of four presentations and discussions, after which they share their thoughts as experts in small groups with others who attended a different presentation. The four presentations and discussions are based on results of two studies on knowledge sharing strategies and influencing factors on knowledge utilization. The workshop has practical applications for both researchers and practitioners: it will support them to create impact in their daily work and in their collaboration.

##### **Creating impact in schools: using knowledge in and from practice-based research projects**

**Presenting Author:**Wouter Schenke, Penta Nova, Netherlands; **Presenting Author:**Helma Oolbekkink, HAN University of Applied Sciences, Netherlands; **Presenting Author:**Patrick van Schaik, HZ University of Applied Sciences, Netherlands; **Presenting Author:**Edwin Buijs, HAN University of Applied Sciences, Netherlands; **Presenting Author:**Janneke Van Der Steen, HAN University of Applied Sciences, Netherlands; **Co-Author:**Katrijn Opstoel, HAN University of Applied Sciences, Netherlands; **Co-Author:**Wilfried Admiraal, Centre for the Study of Professions, Oslo Metropolitan University, Norway

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#### Sessions C 7

23 November 2022 15:15 - 16:45

GWW1 - (0).15

Workshop

##### **Crystallization and the search for artful science**

**Keywords:** Creativity, Innovations in education, Organisation of educational research, Practice-based research (methodology)

**Interest group:** CLOUD 11 - Practice-based Research Methodology

Educational change is a complex matter. Every move needs to be aligned with important others, such as fellow teachers and teacher educators, co-researchers, management teams and school boards, and with regional and (inter)national contexts. If we want educational research to contribute properly to educational change by developing ecologically valid knowledge, we need methodology that allows us to represent this complexity, and that supports dialogue among stakeholders. In this workshop, we introduce a methodological approach called 'crystallization' which states that to get to know an "object" we need to shed different lights on it to co-construct understanding. Crystallization promotes the scientific use of creative methods. Central to the workshop is a hands-on exploration of three creative tools - Family Letters, The Colouring Picture, and Sleeping Beauty. The tools originate from a three-year research project. In the workshop, we collaboratively collect experiences with the tools. Results from our project will be used to further illustrate their potential. Together, we reflect on the value of crystallization in general and creative methods specifically for practice-based educational research. The aim of the workshop is to structurally welcome creativity and creative thinking in practice-based research methodology and educational science.

##### **Crystallization and the search for artful science**

**Presenting Author:**Bregje de Vries, VU University, Netherlands; **Co-Author:**Arwen van Stigt, Kohnstamm Institute, University of Amsterdam, Netherlands; **Co-Author:**Patricia Brouwer, Hogeschool Utrecht Lectoraat Werken in Onderwijs, Netherlands; **Co-Author:**Ditte Lockhorst, Oberon research institute, Netherlands

Educational change is a complex matter. Every move needs to be aligned with important others, such as fellow teachers and teacher educators, co-researchers, management teams and school boards, and with regional and (inter)national contexts. If we want educational research to contribute properly to educational change by developing ecologically valid knowledge, we need methodology that allows us to represent this complexity, and that supports dialogue among stakeholders. In this workshop, we introduce a methodological approach called 'crystallization' which states that to get to know an "object" we need to shed different lights on it to co-construct understanding. Crystallization promotes the scientific use of creative methods. Central to the workshop is a hands-on exploration of three creative tools - Family Letters, The Colouring Picture, and Sleeping Beauty. The tools originate from a three-year research project. In the workshop, we collaboratively collect experiences with the tools. Results from our project will be used to further illustrate their potential. Together, we reflect on the value of crystallization in general and creative methods specifically for practice-based educational research. The aim of the workshop is to structurally welcome creativity and creative thinking in practice-based research methodology and educational science.

#### Sessions C 8

23 November 2022 15:15 - 16:45

GWW1 - (-1).14

Workshop

Vocational education

##### **Stimulating educational renewal by identifying knowledge utilization strategies**

**Keywords:** Innovations in education, Organisation of educational research, School Development, Vocational education

**Interest group:** CLOUD 07 - Research impact on school development



Practitioner research has the potential to contribute to educational renewal. However, in order to successfully contribute to sustainable educational renewal, it is crucial that knowledge, insights and products delivered through practitioner research is utilized by teacher teams. In what way can a researcher stimulate knowledge utilization? In this workshop knowledge utilization is viewed as a dynamic process, where researchers, research products and end-users continuously interact. Both researcher and end user use knowledge utilization strategies (Castelijns & Vermeulen, 2017). Based on a recent NRO study, this workshop will present a practical coding scheme that will help participants to gain insights into knowledge utilization strategies. The coding scheme is illustrated with practical examples. Participants will actively engage with the coding scheme to identify and analyse the knowledge utilization strategies used by themselves and their end-users. In the end, participants create a personal knowledge utilization plan that will enable them to increase the impact of their research on educational renewal.

#### **Stimulating educational renewal by identifying knowledge utilization strategies**

**Presenting Author:**Marloes Lange, HAN University of Applied Sciences, Netherlands; **Co-Author:**Patricia Brouwer, Hogeschool Utrecht Lectoraat Werken in Onderwijs, Netherlands; **Co-Author:**Carlos van Kan, HAN University Nijmegen, Netherlands; **Co-Author:**Merel Wolf, Centre for Expertise in Vocational Education and Training (ecbo), Netherlands

Practitioner research has the potential to contribute to educational renewal. However, in order to successfully contribute to sustainable educational renewal, it is crucial that knowledge, insights and products delivered through practitioner research is utilized by teacher teams. In what way can a researcher stimulate knowledge utilization? In this workshop knowledge utilization is viewed as a dynamic process, where researchers, research products and end-users continuously interact. Both researcher and end user use knowledge utilization strategies (Castelijns & Vermeulen, 2017). Based on a recent NRO study, this workshop will present a practical coding scheme that will help participants to gain insights into knowledge utilization strategies. The coding scheme is illustrated with practical examples. Participants will actively engage with the coding scheme to identify and analyse the knowledge utilization strategies used by themselves and their end-users. In the end, participants create a personal knowledge utilization plan that will enable them to increase the impact of their research on educational renewal.

#### **Sessions C 9**

23 November 2022 15:15 - 16:45

GWW1 - (0).08

Case study

Higher education, Secondary education

#### **Research-based Learning**

**Keywords:** Continuing professional development in Teachers, Deep-level and profound learning, Higher education, Inquiry learning, Research-based learning, Secondary school education, The role of research on learning and instruction in developing education systems

**Interest group:** CLOUD 01 - Teacher education

**Chairperson:** Martijn Leenknecht, HZ University of Applied Sciences, Netherlands

#### **Improving student teachers' deep learning in research lessons: teach what you preach**

**Keywords:** Deep-level and profound learning, Higher education, Research-based learning, The role of research on learning and instruction in developing education systems

**Presenting Author:**Nanke Dokter, Fontys University of Applied Sciences, Netherlands; **Co-Author:**Michel van Ingen, Fontys University of Applied Sciences, Netherlands

Fontys University of Applied Sciences tries to enhance the research culture in their teacher training colleges. Therefore small research groups of teacher educators perform practice based research about curriculum issues. One of these research groups demonstrated that the learning of second year student teachers in their portfolios often turned out to be superficial. However, in the vision of the teacher training college it is assumed that student teachers' deep learning is necessary to learn the profession properly. This resulted in a follow-up study of the educators' research group that had the ambition to improve the deep learning processes of student teachers by performing practice-based research. In ten weeks and eight lessons, the students were guided through a research cycle. The teacher educators showed examples of their own research during the lessons and they guided the student teachers in their research steps. In the poster presentations the student teachers showed more deep learning. The lessons are developed based on nine design criteria for effective teacher professionalization. The project shows that educators modelling a research attitude can enhance student teachers' deep learning. On the organizational level, the project shows that a research culture affects sustainable curriculum innovations.

#### **From an inquiry-based attitude to inquiry-based working**

**Keywords:** Continuing professional development in Teachers, Inquiry learning, Research-based learning, Secondary school education

**Presenting Author:**Martina van Uum, Radboud Teachers Academy, Netherlands; **Co-Author:**Janneke Van Der Steen, HAN University of Applied Sciences, Netherlands

In September 2020, five schools for secondary education, the Radboud Teachers Academy (RDA) and the Academy of Education of HAN University of Applied Sciences (HAN) started a learning community entitled 'From an inquiry-based attitude to inquiry-based working'. The experience of the teachers in the partnership was that most of their colleagues already had an inquiry-based attitude. However this did not automatically result in inquiry-based working in daily practice at their schools. Therefore the goal of the learning community became to promote inquiry-based work of teachers in the participating schools. Each teacher that was part of the learning community started promoting inquiry-based work of colleagues in their own school and evaluated the outcomes. Results of the learning community so far are five different approaches to promote inquiry-based working of teachers together with an overview of factors that can contribute to or challenge this process.

#### **Sessions C 10**

23 November 2022 15:15 - 16:45

GWW1 - (1).08

Roundtable

Higher education

#### **Professionalisation of educators**

**Keywords:** Higher education, In-service Teacher Training, Initial Teacher Education (Pre-service), Primary school education, Professionalisation of educators, Research-based learning

**Interest group:** CLOUD 01 - Teacher education

**Chairperson:** Lisette Munneke, Utrecht University of Applied Sciences, Netherlands

#### **Second career teachers: learning to teach in elementary education**

**Keywords:** Higher education, In-service Teacher Training, Primary school education, Professionalisation of educators

**Presenting Author:**Tamar Tas, Universiteit Utrecht / Hogeschool Utrecht, Netherlands; **Co-Author:**Saskia Brokamp, Hogeschool Utrecht, Netherlands; **Co-Author:**Mieke Koeslag-Kreunen, Universiteit Utrecht / Hogeschool Utrecht, Netherlands

Second career teachers are seen as a possible solution for the increasing shortage of teachers in the Netherlands and in Belgium. Unfortunately, little research

is available on the process of learning to teach of this group of student teachers with a higher prior education (university bachelor/master). For designing teacher training programs for second career teachers, however, such research is essential.

Therefore, this study aims to research the process of learning to teach of second career teachers and compare them to regular student teachers in primary education. The growth of teaching skills is measured with the ICALT observation instrument. An ANCOVA procedure will be used to compare the measured growth in teaching skills between the pretest and posttest of second career teachers to the measured growth of other student teachers. The analysis will consider several confounding variables: student teachers' year of training, whether students teach a single age group, and whether they teach in special primary schools.

Results from this study can be used to improve the quality of training programs for second career teachers. This way these students can be provided with an optimal start in the professional field by learning to teach better in a shorter time span.

#### **Dilemmas in developing student research competence: impulses to professionalize teacher educators**

**Keywords:** Higher education, Initial Teacher Education (Pre-service), Professionalisation of educators, Research-based learning

**Presenting Author:**Belinda Ommerring, Utrecht University of Applied Sciences, Netherlands; **Co-Author:**Marloes van Dijk, Marnix Academie, Netherlands; **Co-Author:**Marjolijn Peltenburg, Marnix Academie, Netherlands; **Co-Author:**Lisette Munneke, Utrecht University of Applied Sciences, Netherlands; **Co-Author:**Miranda Timmermans, Avans university of applied sciences, Netherlands

Perceptions on the role of research within professional higher education are changing. Instead of requiring students to conduct research and write a thesis, development of research competence in service of the profession should be promoted. Marnix Academie (University of Applied Sciences, the Netherlands) initiated a curriculum change by redesigning the graduation phase in such ways that developing and deploying research competence is integrated within graduation assignments that culminate in professional products. Action research is carried out parallel to redesigning the graduation phase, with the following research question: "How did teacher educators re-shape and integrate research competence within the graduation phase and what are their experiences within this process of change?" First a document analysis was conducted to identify how research competence is integrated within the redesigned graduation assignments. Second, semi-structured interviews with teacher educators are currently being conducted to gain deeper understanding of their perceptions of research competence and experiences during the process of redesigning the graduation phase and implementing this novel vision on research competence. Within this roundtable session we would like to discuss our results and, in the context of our action research, explore possibilities to support teacher educators by using dilemmas regarding developing research competence among students.

#### **Sessions C 11**

23 November 2022 15:15 - 16:45

GWW1 - (1).10

Roundtable

Higher education, Primary education

#### **Innovations in Education in Different Contexts**

**Keywords:** Assessment and evaluation, Distance Education, Higher education, Innovations in education, Instructional Design and Instructional Strategies, Primary school education, STEM

**Interest group:** CLOUD 03 - Strategies to improve teaching and learning environments, CLOUD 06 - Learning in Digital Era: Technology Enhanced Learning

**Chairperson:** Achmad Hidayatullah, University of Szeged, Doctoral School of Education, Indonesia

#### **Developing a Design-based Making Pedagogy through Lesson Study**

**Keywords:** Innovations in education, Instructional Design and Instructional Strategies, Primary school education, STEM

**Presenting Author:**Jiajia Li, VU University Amsterdam / LEARN! Institute, Netherlands; **Co-Author:**Suilin Goei, VU University Amsterdam / LEARN! Institute, Netherlands; **Co-Author:**Wouter R. van Joolingen, Utrecht University, Netherlands; **Co-Author:**Maartje Raijmakers, University of Amsterdam, Netherlands

This project aims to invite Chinese elementary school teachers across STEM (Science, Technology, Engineering, Mathematics) to develop a pedagogy for Maker Education (Making Pedagogy), by participating in Lesson Study (LS). The model of LS used will be a combination of Chinese Lesson Study (CLS) and UK Research Lesson (UKRL). A discerning feature is that Design Thinking (DT) will be adopted to restructure Making Pedagogy, developing design-based making pedagogy. Subsequently, in the LS-teams teachers will be asked to design Maker activities that contribute to students' Maker Mindsets development. The latter contributes to increasing students' problem-solving ability, self-efficacy, learning attitudes in STEM studies. During the LS, the aim is also that participating teachers will develop pedagogical content knowledge (PCK) and skill to use DT-tools and -procedures. Thus, the research questions are: R1. How to use integrated LS to support elementary school teachers to develop a feasible making pedagogy that supports MM, with the support of DT?R2. What is the resulting Making Pedagogy developed by teachers and how does that contribute to the development of students' maker mindsets?R3. Whether there is an improvement in teachers' professional development after receiving training in terms of PCK, self-efficacy, DT skills?

#### **MicroLearning via Telegram: Online University Teaching in Spain**

**Keywords:** Assessment and evaluation, Distance Education, Higher education, Innovations in education

**Presenting Author:**Arina Gruija Anghel, Universidad a Distancia de Madrid (UDIMA), Spain; **Co-Author:**Aitana González Ortiz de Zárate, Udima (Madrid Open University), Spain; **Co-Author:**Luis Manuel Fernández Martínez, Universidad a Distancia de Madrid (UDIMA), Spain

Technology and education offer the possibility of teaching through mobile devices in microLearning format. We analyzed the effects of a MicroLearning experience via Telegram in the satisfaction with the activity, academic engagement, knowledge acquisition and personal transfer. We used a quasi-experimental pre-post design with non-equivalent control group and sampling for convenience. The intervention consisted of a microLearning activity taught in audio format via Telegram that required reflection, documentation, and oral communication. The standard intervention applied a traditional task in distance education consisting of a written assignment that required reflection and documentation. Participants were 215 students from Universidad a Distancia de Madrid (Udima). We measured academic engagement (EQ), satisfaction with the training, personal transfer, and knowledge acquired. Data analyses included descriptive statistics, confirmatory factor analysis (CFA) and t-test for independent samples. Results will be representative for the students of the courses analyzed, and data collected will contribute to the process of innovation based on evidence at Udima. Results will contribute to theory building in MicroLearning and mobile teaching evaluation. Implications for online teachers are described.

**Keywords:** innovations in education, instructional design and instructional strategies, assessment and evaluation, distance education, higher education, teaching approaches.

#### **Sessions C 12**

23 November 2022 15:15 - 16:45

GWW1 - (1).18

Roundtable

Higher education, Vocational education

#### **Blended Learning in Different Contexts**

**Keywords:** Beliefs and conceptions of learning, Beliefs and conceptions of teaching, Blended learning, Higher education, Learning styles / approaches, Vocational education, Workplace learning

**Interest group:** CLOUD 04 - Improving learning and well-being, CLOUD 11 - Practice-based Research Methodology

**Chairperson:** Tom Adams, Fontys University, Netherlands

### **Designing a student-centered, international study program in vocational education**

**Keywords:** Blended learning, Higher education, Vocational education, Workplace learning

**Presenting Author:** Katharina Prummer, Technical University of Munich, TUM School of Social Sciences and Technology, Germany; **Co-Author:** Anna Trikoili, Technical University of Munich, Germany; **Co-Author:** Daniel Pittich, Technical University of Munich, Germany

Higher education in vocational and technical contexts undergoes drastic changes due to the phenomena of globalization and digitalization. Following society's shift from industrial- to information-based, vocational education needs to adjust to the new circumstances, and the recent pandemic highlighted this need in the most profound way. Answering to this need for upskilling, we created a part-time Master of Science degree for professionals in vocational education, which introduces a change in practice on two levels: the design and the methodology of the qualification. The program is designed in a blended learning mode and revolves around the shift from teacher- to student-centered learning. The teaching methodology follows the principals of inquiry-based and work-based learning. The research we will conduct during the pilot phase of the study program will focus on identifying the potential transformation in innovative teaching methodologies, professionalization in vocational education and training through life-long learning practices and workplace learning. In addition, the findings will serve as indicators for the formative evaluation of the program and can be of use to educators aiming to enhance students' higher order thinking, collaboration and social interaction skills and equip them with sustainable competencies that are required in professional environments today.

### **Formats of self-organized learning and their reception by lecturers**

**Keywords:** Beliefs and conceptions of learning, Beliefs and conceptions of teaching, Blended learning, Learning styles / approaches

**Presenting Author:** Tillmann Grüneberg, Hochschule der Bundesagentur für Arbeit, Germany

The career counselors of the Federal Employment Agency in Germany (approx. 6,000 people) have been participating in an academic professional development program on counseling competences in several waves since 2020 (each approx. 5 months part-time). The continuing education is implemented as a blended learning concept (flipped classroom) with a high proportion of self-organized learning (cf. Greif & Kurz 1996). This includes study letters, background reading, learning videos, tandem work, learning transfer tasks and discussion circles. Learners are supported by reflection seminars, individual learning coaching (reflection on the process) and supervision (case reflection). The research question is how lecturers assess the learning success of the different primarily self-organized learning formats that they support themselves. To collect data, the lecturers (N=20) will be surveyed through focus group interviews. The interviews include four key blocks. First, the common understanding of the term (Definition and implementation) second, the impact (Effects and barriers) thirdly the support by the lecturers (Definition of their own role in the support) and fourthly, a conclusion. The transcriptions of the discussions are categorized by a structuring content analysis (based on Kuckartz 2018 and Mayring 2019) and analytically intertwined with the results of a participant evaluation (n=501).

### **Sessions D 1**

23 November 2022 17:00 - 18:30

GWW1 - (0).15

Roundtable

### **EAPRIL Roundtable**

**Keywords:** 21st century learning, Assessment and evaluation, Practice-based research (methodology), Writing

**Interest group:**

**Chairperson:** Martijn Willemse, Windesheim University of Applied Sciences, Netherlands

### **An invitation to improve the process towards an informative way of reviewing EAPRIL submissions**

**Keywords:** 21st century learning, Assessment and evaluation, Practice-based research (methodology), Writing

**Presenting Author:** Elke Emmers, Universiteit Hasselt, Belgium; **Presenting Author:** Lisette Munneke, Utrecht University of Applied Sciences, Netherlands;

**Presenting Author:** Martijn Willemse, Windesheim University of applied sciences, Netherlands; **Presenting Author:** Harry Stokhof, HAN University of Applied Sciences, Netherlands

Peer review is a two-way process in which reviewers give input on the work of a peer-expert and receive feedback from reviewers on their own work. Expertise and experience are required in providing rich, clear and accurate feedback and inspiring recipients to engage with it. With a plethora of conceptual and empirical works published in the last two years, feedback literacy is an emerging but very interesting research topic. As a conference where young researchers and older seasoned professionals participate in workshops, lectures and round tables, it is important to actively promote proper review procedures. However, at this moment we see changes to improve the review procedure in two ways. When it comes to the more practice based/informed contributions, often information about the research design is lacking, and no consideration is given to the research's potential for valorization or practical value. Next to this, given feedback of reviewers isn't always helping (young) researchers to improve their contributions or to reflect on the meaning of the review for the actual performance at the conference. To tackle these problems EAPRIL started a pilot with new submission and review formats that differs from the conventional formats circulating in the conference landscape. With these new formats we hope to provide (young) researchers with appreciative feedback that helps to improve contributions during a next submission or between submission and actual performance at the conference. In order to substantiate these new formats we want to use this round table to evaluate and discuss this new formats with members of the EAPRIL.

### **Sessions D 2**

23 November 2022 17:00 - 18:30

GWW1 - (0).16

Roundtable

Higher education

### **Curricula in Higher Education**

**Keywords:** Assessment and evaluation, Curricula, Educational Effectiveness and quality of education, Higher education, Initial Teacher Education (Pre-service), Leadership development, Lifelong Learning, Professional identity, Professionalisation of educators

**Interest group:** CLOUD 02 - Educators' professional development, CLOUD 13 - Starting Researchers

**Chairperson:** Johan Smarius, Avans Hogeschool / Avans University of Applied Sciences, Netherlands

### **How to develop change agents? Transformational leadership towards a sustainable world**

**Keywords:** Curricula, Higher education, Leadership development, Professional identity

**Presenting Author:** Franceina van Zalk, HAN University Nijmegen, Netherlands

In my impending PhD-trajectory I would like to determine the mechanisms associated with the development of transformational leadership competences within higher economic education. My goal is to design a format with an overview of effective design mechanisms for the development of change agents which educational practitioners can use and apply to their specific contexts, in order to facilitate the transition towards a sustainable world in higher education. My preliminary research questions are as follows:

- What inter- and intrapersonal competencies define a change agent circular economy?
- How does transformational leadership contribute to the development of the defined competencies?
- How can transformational leadership competencies effectively be developed in higher economic education?

With an array of suitable methods including literature based research, qualitative research and participatory research, I would like to involve relevant stakeholders in answering the above research questions. Subsequently I want to perform a (realist) evaluation of the curriculum Transformational Leadership of the master Circular Economy (HAN, Netherlands), of which I am designer. In this round table session I would like to discuss with the participants how I could best go about the research in order to reach my goal.

#### **To guide or not to guide: Students' choices in flexible modular education**

**Keywords:** Curricula, Higher education, Lifelong Learning, Professionalisation of educators

**Presenting Author:**Suzan van Brussel, Avans University of Applied Sciences, Netherlands; **Presenting Author:**Esther van der Stappen, Avans University of Applied Sciences, Netherlands; **Co-Author:**Milou van Harsel, Avans University of Applied Sciences, Netherlands; **Co-Author:**Johan Smarius, Avans Hogeschool / Avans University of Applied Sciences, Netherlands

A central ambition in Dutch higher education is flexibility. This means that students are able to make all kinds of choices in their learning process. One possible way to create flexibility in higher education is to offer students freedom of choice in the courses to be taken. This way, students are able to create a personal learning program. From the literature on secondary students' selection process for higher education, or on choosing a minor, it is known that students often make their choice based on rather superficial cues (Germeijs et al., 2012; Vulperhorst, 2020; Van Deuren, 2010). Therefore, an open question is whether higher education students are able to make course choices that best fit their ambitions as a result of an informed reasoning process in a flexible curriculum. Furthermore, there is a need for information provision, support and guidance from the institution (Moitus et al., 2020). Not much is yet known about effective ways to support these students in their decision-making process. Therefore, we will provide the audience insights in students' decision-making processes from secondary education and choosing a minor, and how optimal decision-making support in higher education can be realized with technology to enhance an optimal decision-making process.

#### **Tailormade coaching of student teachers: Towards reliable and valid feedback and assessment**

**Keywords:** Assessment and evaluation, Curricula, Educational Effectiveness and quality of education, Initial Teacher Education (Pre-service)

**Presenting Author:**Oscar Terpstra, Hogeschool Utrecht (University of Applied Sciences Utrecht), Netherlands; **Co-Author:**Tamar Tas, Universiteit Utrecht / Hogeschool Utrecht, Netherlands; **Co-Author:**Saskia Brokamp, Utrecht University of Applied Sciences, Netherlands; **Co-Author:**Mieke Koeslag-Kreunen, Utrecht University of Applied Sciences, Netherlands; **Co-Author:**Ryan Jansen, Utrecht University of Applied Sciences, Netherlands

The pressing teacher shortness urges teacher training colleges to train student teachers in a short time span. At the same time, the quality of upcoming teachers needs to increase. To do so, two Dutch university colleges use developmentally appropriate coaching to train students' teaching skills in school practices, in which a psychometrically tested lesson observation instrument is central. However, this current approach falls short. Firstly, it is unknown how students' teaching skills develop over time. Secondly, coaching elements, such as lesson observation and feedback criteria, provide objective information on the progress of student teachers' teaching, which is currently not included in the assessments. As a result, assessments seem unreliable, and educators struggle to provide tailormade feedback. Addressing these concerns, this paper studies how students' teaching skills develop when observed triannually using an observation instrument. This development will be measured with a paired t-test. Additionally, a cross-institutional community of researchers will explore how these triannual observations can be used to develop a framework for educators that supports tailormade feedback and valid and reliable assessments. During the round table, the observation scores will be discussed, and a brainstorm will be conducted on how this information can be used in assessment and feedback.

#### **Sessions D 3**

23 November 2022 17:00 - 18:30

GWW1 - (-1).14

Roundtable

Lifelong learning, Vocational education

#### **Practice-based Research Methodology**

**Keywords:** At-risk students, Collaborative Learning, Higher education, Inclusivity, Mentoring, Practice-based research (methodology), Vocational education, Work environments

**Interest group:** CLOUD 11 - Practice-based Research Methodology

**Chairperson:** Torhild Høydalsvik, Volda University College, Norway

#### **Equal collaboration in practice based research**

**Keywords:** Collaborative Learning, Higher education, Practice-based research (methodology), Vocational education

**Presenting Author:**Aimee Hoeve, HAN University of Applied Sciences, Netherlands; **Presenting Author:**Kariene Mittendorff, Saxion University of Applied Sciences, Netherlands; **Co-Author:**Hester Smulders, Deltion College, Netherlands; **Co-Author:**Peter den Boer, Onderzoeksbureau Onderzoekend Leren, Netherlands

Dutch upper secondary and higher professional education institutes strive for active involvement in practice based research, in which researchers and practitioners work together to design and perform research in their professional fields. Over the past 20 years the leaders of this round table, each of us working in different work environments, have formed an informal learning group in order to improve our own practice based research. In continuation of this effort, we presented and discussed six ground rules for co-designing and implementing meaningful practice-based research (based on Basten et al., 2019) in previous Eapril workshops (2019, 2021). These efforts have resulted in an general overview of instruments and methods and when to use them. One of the main issues that keeps coming up, is that actual and equal collaboration between researchers and practitioners is hardly realized. We experience this most strongly at the start of most research, when questions arise about research quality: what is needed for a (practice based) research to be 'good', useful, etc.? This round table will focus on discussing the challenges of creating a dialogical approach from the start, in which divergent ambitions, interests, work styles, cultures and quality standards are brought together.

#### **Youth in a vulnerable position and the development of their career agency**

**Keywords:** At-risk students, Inclusivity, Mentoring, Work environments

**Presenting Author:**Marijn Neuman-Sjonger, Friesland College, Netherlands; **Co-Author:**Monique Volman, University of Amsterdam, Netherlands; **Co-Author:**Marco Mazereeuw, Friesland College, Netherlands

Many vulnerable young people in the Netherlands experience difficulties to start their careers. They take insufficient or no first steps to shape their career due to obstacles they encounter while trying to make their first steps into the labor market. In this study, we will ultimately follow approximately forty vulnerable young people over a period of three to four years. To date, we have started interviewing the young people concerned, and we will interview involved professionals like counselors and former teachers. Besides this, we also contact the parents or other directly involved to form a complete picture of their context. The analyses should map the obstacles and opportunities the young people encounter in shaping their careers and surface the mechanisms that may explain their development of career agency. In collaboration with the guiding professionals, we develop interventions that may realize breakthroughs in the sense that the young people take steps in shaping their careers. We will be monitoring the young people by having reflective conversations with them after an intervention took place. With the conversations, we aim to track down the impact of the intervention on the development of their career agency.

#### **Sessions D 4**

23 November 2022 17:00 - 18:30

GWW1 - (-1).09

Workshop  
Higher education

### **In search of your inner supervisor**

**Keywords:** Continuing professional development in Teachers, Higher education, Project-based learning, Writing

**Interest group:** CLOUD 01 - Teacher education

In this reflective workshop, we explore/develop participants' experiences/understanding of (online) supervision / advising as resilient forms of learning and acquisition of academic literacies. Literacies that should enable student to use the latter in their future jobs and citizenship as well as their lifelong learning. The participants will get the opportunity to discover their 'inner supervisor'. The workshop is aiming at fostering 'reflection-in-action' and 'reflection-on-action' by pondering on the interactive practice and enactment of supervision. Together, we shall explore the participants' experiences with supervision and further develop the participants' (and our own) understanding/s of supervision enabling and constraining 'joint scaffolding', 'resilient learning', critical thinking, and acquisition of research literacies.

### **In search of your inner supervisor**

**Presenting Author:**Karl-Heinz Pogner, Copenhagen Business School, Denmark; **Co-Author:**Vibeke Ankersborg, Copenhagen Business School, Denmark

In this reflective workshop, we explore/develop participants' experiences/understanding of (online) supervision / advising as resilient forms of learning and acquisition of academic literacies. Literacies that should enable student to use the latter in their future jobs and citizenship as well as their lifelong learning. The participants will get the opportunity to discover their 'inner supervisor'. The workshop is aiming at fostering 'reflection-in-action' and 'reflection-on-action' by pondering on the interactive practice and enactment of supervision. Together, we shall explore the participants' experiences with supervision and further develop the participants' (and our own) understanding/s of supervision enabling and constraining 'joint scaffolding', 'resilient learning', critical thinking, and acquisition of research literacies.

### **Sessions D 5**

23 November 2022 17:00 - 18:30

GWW1 - (-1).13

Workshop

Vocational education

#### **Monitoring long-term student progress: learning progressions and formative assessment**

**Keywords:** Assessment and evaluation, Competence-based education, Professionalisation of educators, Vocational education

**Interest group:**

This workshop is based on the methods, instruments and tools we developed during a 2-year research project in collaboration with four VET teacher teams (end date of the project: August 2022). This research project focuses on the question whether learning progressions can help teachers to make their formative assessment activities more goal-directed, that is, focused on the intended learning goals and students' learning path towards these goals. Learning progressions characterize how students' thinking, doing and reasoning increases in sophistication when students develop towards a longer-term learning goal.

In this workshop, the participants get introduced into the concept of learning progressions, including examples from the research project made by the VET teams. This is followed by two methods / tools developed during the project, which enable the participants to work on a (draft) learning progression for their own educational context. A short introduction is given on formative assessment activities, and the importance of connecting formative assessment to students' learning path. Next, the participants again work with methods developed during the research project, focused on the development of formative assessment activities that are connected to the learning progression.

#### **Monitoring long-term student progress: learning progressions and formative assessment**

**Presenting Author:**Liesbeth Baartman, University of Applied Sciences Utrecht, Netherlands; **Co-Author:**Judith Gulikers, Wageningen University, Netherlands

This workshop is based on the methods, instruments and tools we developed during a 2-year research project in collaboration with four VET teacher teams (end date of the project: August 2022). This research project focuses on the question whether learning progressions can help teachers to make their formative assessment activities more goal-directed, that is, focused on the intended learning goals and students' learning path towards these goals. Learning progressions characterize how students' thinking, doing and reasoning increases in sophistication when students develop towards a longer-term learning goal.

In this workshop, the participants get introduced into the concept of learning progressions, including examples from the research project made by the VET teams. This is followed by two methods / tools developed during the project, which enable the participants to work on a (draft) learning progression for their own educational context. A short introduction is given on formative assessment activities, and the importance of connecting formative assessment to students' learning path. Next, the participants again work with methods developed during the research project, focused on the development of formative assessment activities that are connected to the learning progression.

### **Sessions D 6**

23 November 2022 17:00 - 18:30

GWW1 - (1).10

Workshop

Higher education

#### **Diversity and inclusion in higher education: The experience**

**Keywords:** Continuing professional development in Teachers, Diversity, Higher education, Inclusivity

**Interest group:** CLOUD 02 - Educators' professional development

This workshop is about diversity and inclusion in higher education, more specifically, about educational professionals' teaching practices that make students feel welcome and appreciated or not. The aims of the workshop are to raise awareness of diversity in student experiences and needs to fulfill their sense of belonging, to promote reflection on personal biases in interaction with students and on own professional practices and to trigger ideas for further development. After a short introduction in the topic of diversity and inclusion and the important role educational professionals play, participants will be divided in two groups. One group will start with a photovoice experience, in which photos will be taken / looked up and discussed following a short version of the photovoice methodology (Wang & Burris, 1997). The other group will start with the immersive experience circuit 'See through' which consists of seven immersive experiences (e.g. gender bias, micro aggression, ADHD) that will be carried out in duos. The goal of this circuit is to start the dialogue, each experience poses critical questions and trigger the user to empathise. After 30 minutes groups switch. The workshop will be concluded by a group reflection on experiences, insights and ideas for further development.

#### **Diversity and inclusion in higher education: The experience**

**Presenting Author:**Linda van den Bergh, Fontys Opleidingscentrum Speciale Onderwijszorg, Netherlands; **Co-Author:**Karin Diemel, Fontys University of Applied Sciences, Netherlands; **Co-Author:**Ilonka van der Sommen, Fontys OSO, Netherlands; **Co-Author:**Mathijs van Gageldonk, Fontys Pulsed, Netherlands

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#### Sessions D 7

23 November 2022 17:00 - 18:30

GWW1 - (1).20

Case study

Higher education, Secondary education

#### Learning in the Digital Era

**Keywords:** 21st century learning, Collaborative Learning, Doctoral education (PhD education), Instructional Design and Instructional Strategies, Practice-based research (methodology)

**Interest group:** CLOUD 06 - Learning in Digital Era: Technology Enhanced Learning

**Chairperson:** Martin VanderPlas, Scalda, Netherlands

#### Hackathons: A creative approach to developing researchers and solving educational... (CANCELLED)

**Keywords:** 21st century learning, Collaborative Learning, Doctoral education (PhD education), Instructional Design and Instructional Strategies

**Presenting Author:** Gillian Lake, DCU, Ireland

In November 2021, DCU Institute of Education held a two-day virtual hackathon event called '*Hack to Transform*'. This event for postgraduate research students invited participants to solve/hack an education challenge for the 21st Century. DCU Institute of Education *Postgraduate Researcher Development Framework* identifies skills that research students may wish to develop during their postgraduate research degree. In *Hack to Transform*, the focus was on one quadrant of the framework: Personal Effectiveness Competencies. This short, fast-paced event enabled students to practise their creative problem-solving skills, work in a new team and create a pragmatic solution to an education challenge. The students pitched ideas, voted on the five most workable solutions and formed teams within which they could hack. Each of the five teams were supported by mentors outside of academic settings and presented their solution to the judging panel in an innovative way. Judging criteria were provided and a scoring rubric enabled the five judges to pick the winner. This Nano Challenge Based Learning event provided an opportunity for realisation of the vision for Doctoral study in the IoE. That vision espouses that postgraduate study does not operate within a vacuum, but rather within a vibrant, dynamic and interactive academic community.

#### Collaborative Learning in Classrooms: Students' Experiences and Attitudes Matters

**Keywords:** 21st century learning, Collaborative Learning, Instructional Design and Instructional Strategies, Practice-based research (methodology)

**Presenting Author:** Cecilie Kristoffersen, University of South-Eastern Norway, Norway; **Co-Author:** Fazilat Siddiq, University of South-Eastern Norway, Norway;

**Co-Author:** Knut Aukland, Oslo Metropolitan University, Norway; **Co-Author:** Simon Simchai Hansen, Oslo Metropolitan University, Norway; **Co-Author:** Ingrid Helle, Bekkestua skole, Norway; **Co-Author:** Karen Austad Christensen, Bekkestua skole, Norway

Collaborative learning in digital environments has gained increased focus across the last two decades, and been integrated into compulsory curricula in many countries as a critical 21st century skill. However, there is a limited access to concrete available teaching and learning materials to develop students' collaborative learning competences. To contribute to this gap, we aimed at developing and investigating a framework for facilitating the development of students' collaborative learning. Moreover, we designed a teaching program focusing on the subjects social science and religion. We applied a design-based research approach across a period of 2-years. In this case study, we focus on the students' perceptions, experiences and attitudes towards collaborative learning in general and related to the project they participated in. We conducted semi-structured interviews with three focus groups, and data was analysed using thematic analysis. Our preliminary findings show that the students hold positive attitudes towards collaborative learning and consider it important skills they should learn at schools. Yet, their understanding of collaborative learning is narrow and focuses mostly on solving the tasks and not the process of collaboration nor the skills needed to be able to contribute to collaborative learning. The findings and their implications will be discussed.

#### Sessions D 8

23 November 2022 17:00 - 18:30

GWW1 - (0).11

Present & Discuss

Higher education, Secondary education

#### Assessment & Evaluation

**Keywords:** 21st century learning, Assessment and evaluation, Beliefs and conceptions of learning, Higher education, Learning and neuroscience, Mathematics Education, Meta-cognition and metacognitive learning

**Interest group:** CLOUD 10 - Assessment & Evaluation

**Chairperson:** Ilkka Väänänen, Finland

#### Students' mathematics-related beliefs and performance on word problems solving

**Keywords:** 21st century learning, Beliefs and conceptions of learning, Mathematics Education, Meta-cognition and metacognitive learning

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

The purpose of this study is to examine the predictive power of students' mathematics-related beliefs on their word problem-solving performance. Using the purposive sampling method, 234 students participated in the present study. Mathematics-related beliefs system supported the ICT questionnaire and word problems were administered to students. Two hypotheses, mediation beliefs mathematics as social activity and beliefs significance of and competence mathematics, have been developed and examined. The finding of this study from the result of structural equation modeling showed beliefs about the significance of and competence mathematics mediated beliefs about the role of and functioning of the teacher and beliefs about the role of ICT on students' performance when doing word problem-solving. Beliefs about the significance of and competence in mathematics are the most powerful aspect that predicted students' achievements

#### Control decisions in test preparation

**Keywords:** Assessment and evaluation, Higher education, Learning and neuroscience, Meta-cognition and metacognitive learning

**Presenting Author:** Jeroen van der Linden, HAN University of Applied Sciences / Maastricht University, Netherlands; **Co-Author:** Tamara van Schilt-Mol, Hogeschool van Arnhem en Nijmegen, Netherlands

Most courses in HE are finalised with one or multiple assessments which commonly all have to be passed. In these courses, student learning is commonly

measured with conventional classroom tests and therefore, test preparation is a common task for students in HE. Students in HE are faced with a more complex curriculum and perform their studies with less guidance and resources like time and effort are limited. Therefore, effectiveness and efficiency of test preparation is important. An important strategy to make learning effective in the context of test preparation, is to make the appropriate control decisions, for instance to stop test preparations on specific contents and (re)study other contents that need attention. We conducted a qualitative study on how students came to making control decisions during a test preparation period for a knowledge test in Educational Sciences at a teacher training program at a large University of applied Sciences in the Netherlands. Results show that the quality of the progressions of learning judgments and the self-efficacy of students led to two different kind of saturations. This in turn led to students making either no, inaccurate or accurate control decisions. We will discuss the impact and practical implications of this insight.

#### **Sessions D 9**

23 November 2022 17:00 - 18:30

GWW1 - (0).33 Part I

Meet-up

Higher education

#### **Equipping Students for their Active Role in Feedback Processes: Integrating Feedback in Curricula**

**Keywords:** Higher education, Innovations in education, Instructional Design and Instructional Strategies, Self-regulation and self-regulated learning

**Interest group:** CLOUD 10 - Assessment & Evaluation

Currently, ample attention is being drawn to feedback processes within higher education, where the aim is for students to be able to actively engage with feedback to further their personal and professional development within their chosen field of study. Engaging with feedback includes the ability to ask for, receive, give and act upon feedback. To ensure students are able to take up such an active role they need to be given appropriate support. On the one hand stand-alone programmes have some positive results, but there is a lack of convincing positive results towards active student engagement with feedback. On the other hand, there appears to be a need for a multi-faceted in depth approach where the student and feedback are viewed in connection with their environment. Therefore, to address this identified student need, the first steps have been taken to develop a set of generic learning outcomes which can be incorporated into any AD or Bachelor curriculum.

#### **Equipping Students for their Active Role in Feedback Processes: Integrating Feedback in Curricula**

**Presenting Author:** Martijn Leenknecht, HZ University of Applied Sciences, Netherlands; **Co-Author:** Hanneke Wiltjer, HZ University of Applied Sciences, Netherlands

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#### **Sessions D 10**

23 November 2022 17:00 - 18:30

GWW1 - (0).33 Part II

Meet-up

Higher education

#### **Critical thinking while lifelong learning**

**Keywords:** 21st century learning, Cognitive Skills & Development, Inquiry learning, Lifelong Learning

**Interest group:** CLOUD 08 - Diversity & equality in different contexts

Critical thinking and lifelong learning are among the most important 21st century skills. Higher education students are supposed to be lifelong learners, and critical thinkers. A range of digital platforms provide information that can be used to promote lifelong learning formally, non-formally, and informally. However, choosing the right platforms and accessing the correct information is getting difficult day by day due to the fast changing technology and different forms of knowledge. Higher education students are supposed to self-regulate their own learning. However, they may not think critically while conducting lifelong learning activities. Therefore, I would like to explore how they approach lifelong learning and whether they are critical thinkers while pursuing lifelong learning.

#### **Critical thinking while lifelong learning**

**Presenting Author:** Sibel Inci, Kocaeli University, Turkey

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#### **Award Session 1**

24 November 2022 08:45 - 10:00

K33 - A0.05 + LvS10 - F0.70

Best Practice-Based Research Award

Higher education, Workplace learning

#### **Best Practice-Based Research Award 2022 Session**

**Keywords:** Assessment and evaluation, Collaborative Learning, Early childhood education, Economy education, Emotion and emotional development, In-service Teacher Training, Research-based learning, Training and Development, Vocational education, Web-Based Learning, Workplace learning

**Interest group:** CLOUD 02 - Educators' professional development, CLOUD 05 - HRD & Workplace learning, CLOUD 11 - Practice-based Research Methodology

**Chairperson:** Elke Emmers, Universiteit Hasselt, Belgium

#### **Learning Task Sharing in Human-Robot Interaction - A Workplace-Based Approach**

**Keywords:** Assessment and evaluation, Research-based learning, Training and Development, Workplace learning

**Presenting Author:** Bernd Hader, TU Wien, Austria; **Co-Author:** Sebastian Schlund, TU Wien, Austria; **Co-Author:** Christina Schmidbauer, TU Wien, Institute of Management Science, Austria; **Co-Author:** Setareh Zafari, Management science, Austria

We took a practice-oriented, workplace-based approach to teach workers how to share tasks between humans and collaborative robots (cobots). Workers from

the electronics industry were invited to an industrial experimental setup where they could work in their everyday, purely manual workplace with the support of a cobot. After a safety and setup instruction, they were randomly assigned to start with one of two task sharing settings, either a static task allocation, where tasks were pre-assigned to the cobot or themselves or an adaptive, self-determined task allocation, where the workers could decide on the task allocation themselves. Upon completion of first scenario, participants filled out a questionnaire and then continued with the second scenario. Finally, we conducted interviews asking about participants' experience. 25 workers learned how to safely interact with and use a cobot in their work environment and how to use a digital worker assistance system to share the tasks. Additionally, we assessed their experience and made remarkable human factors research findings. Our findings were that workers like to take over the decision-making authority of task allocation in human-robot interaction and their perceived control and competence is higher within the adaptive task-sharing scenario.

#### **TunTuVa -program for enhancing early childhood educators' skills in co-regulation of emotions**

**Keywords:** Collaborative Learning, Early childhood education, Emotion and emotional development, In-service Teacher Training

**Presenting Author:**Kristiina Mänty, University of Oulu, Finland; **Co-Author:**Susanna Kinnunen, University of Oulu, Finland; **Co-Author:**Outi Rinta-Homi, University of Oulu, Finland; **Co-Author:**Hanna Jarvenoja, University of Oulu, Finland; **Co-Author:**Marika Koivuniemi, University of Oulu, Finland

It is essential to equip children with emotion regulation skills that help them to operate in academic and social environments and that contribute to their wellbeing. However, this requires skilled adults, who can identify opportunities for learning and provide children systematic and sensitive support for rehearsing these skills. Therefore, we introduce a work-integrated collaborative learning program for improving early childhood educators' skills to provide this support. This program increases educators' awareness of emotional development in early childhood and improves educators' skills in co-regulation of emotions in authentic interactions with children. The program content and design draw on theoretical framework of self-, co- and shared regulation of emotions, emotional development and the aspects of effective collaborative and professional learning. The program includes six phases (be aware, identify, support, monitor, reflect, consolidate) in which the participants are supported in familiarizing themselves with theoretical knowledge, observing their practices based on it and discussing in teams to identify practices that need developing and consolidating new ones. An intervention study with 450 educators showed improvement educators' self-efficacy and skills in (co-)regulation of emotions after the program. The discussions with the participants brought insight to further research, particularly in the educators' emotional interactions with colleagues.

#### **Student Learning Ambassadors: A Bridge to professional practices**

**Keywords:** Economy education, Vocational education, Web-Based Learning, Workplace learning

**Presenting Author:**Ning Ding, Hanze University of Applied Sciences, Germany; **Co-Author:**Xiaoyan Xu, Hanze University Groningen. University of Applied Sciences, Netherlands

Aiming at filling in the gap between rapidly developing business professional work and the relatively static curriculum In Dutch higher vocational education, we initiated a project called "Student Learning Ambassadors", which is based on the following rationale: (1) some students in higher vocational education can accomplish an online course based on their improved learning skills from the pandemic era; (2) there is a gap between the curriculum of Dutch higher vocational education and the requirements at professional workplaces, and (3) some students have a strong desire to build up more advanced and challenging capacities to become competitive in the job market. The project was carried out in an International Business School of a Dutch University of Applied Sciences. The school expertise leaders scrutinized and recommended a list of online courses which address the professional needs for the newest subject knowledge or skills, and students volunteered to join the online course. To strengthen the learning gain, they were randomly paired. After 30 days of intensive learning, they received certificates from the online course providers. Then, they reproduced the knowledge by making short instructional videos and the school expertise leaders evaluated the quality and archived them for internal and external knowledge sharing.

#### **Sessions E 1**

24 November 2022 10:45 - 12:15

GWW1 - (1).09

EAPRIL Cloud Spotlight Session

#### **CLOUD 10 - Education for Sustainability**

**Keywords:** 21st century learning, Equality / Education for All, Innovations in education, The role of research on learning and instruction in developing education systems

**Interest group:** CLOUD 10 - Education for Sustainability

Spotlight Session 1: Education for Sustainability (Cloud 10)

**Keywords:** local and global challenges, Education for Sustainability, educational approaches, key issues

**Chairperson/ discussant:** Stella van der Wal-Maris

This spotlight session provides an introduction to 'Education for Sustainability', exploring some of the innovative 'Education for Sustainability' approaches designed to provide learners with the values, knowledge, skills and attitudes to take action in relation to complex local and global challenges. Participants will have the opportunity to share their understandings and experiences of (research on) sustainability and 'Education for Sustainability'.

We will wrap up this session by a group discussion and jointly identifying key issues for the future of (research on) 'Education for Sustainability'.

#### **CLOUD 10 - Education for Sustainability**

**Presenting Author:**Stella van der Wal-Maris, Marnix Academie, University of Applied Sciences, Netherlands

Spotlight Session 1: Education for Sustainability (Cloud 10)

**Keywords:** local and global challenges, Education for Sustainability, educational approaches, key issues

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We will wrap up this session by a group discussion and jointly identifying key issues for the future of (research on) 'Education for Sustainability'.

#### **Sessions E 2**

24 November 2022 10:45 - 12:15

GWW1 - (0).08

EAPRIL Cloud Spotlight Session

#### **CLOUD 12 - Research results about leadership practices in education**

**Keywords:** Early childhood education, Leadership development, Primary school education, School Development

**Interest group:** CLOUD 12 - Leadership in Education

Leadership in education is important: school leaders are the second most important factor contributing to students' outcomes. There is growing consensus among international researchers about the leadership practices that foster improvement in instruction and student learning. Leadership practices are not the



privilege of formal leaders, but can also be conducted by informal leaders. Ideally, leadership practices are coordinated efforts among participants to achieve a distinctive outcome. In our cloud session several Dutch researchers will present their research about leadership practices from different perspectives. Each perspective will be presented shortly in an elevator pitch. Participants can choose for one of these perspectives, which will be presented in two rounds of table sessions. The table sessions will be continued by an open dialogue between the researchers and the participants.

#### **CLOUD 12 - Research results about leadership practices in education**

**Presenting Author:**Loes van Wessum, Windesheim Flevoland, Netherlands; **Presenting Author:**Anje Ros, Fontys University of Applied Sciences, Netherlands; **Presenting Author:**Angela de Jong, Hogeschool Utrecht, Netherlands; **Presenting Author:**Rachel Verheijen-Tiemstra, Fontys University of Applied Sciences, Netherlands; **Presenting Author:**Patrick van Schaik, HZ University of Applied Sciences, Netherlands; **Presenting Author:**Wouter Schenke, Penta Nova, Netherlands; **Co-Author:**Marjan Vermeulen, Heerlen Open Universiteit, Netherlands

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#### **Sessions E 3**

24 November 2022 10:45 - 12:15

GWW1 - (0).37

EAPRIL Cloud Spotlight Session

#### **CLOUD 13 - Jump in!: round tables on research ideas and designs**

**Keywords:** Doctoral education (PhD education), Innovations in education, Practice-based research (methodology), Professionalisation of educators

**Interest group:** CLOUD 13 - Starting Researchers

The 'starting researchers' cloud'. This cloud is meant to become a vibrant international network for starting, practice-based researchers (from all ages), in the field of (innovation in) learning (learning occurring in different contexts as well as at different levels).

In this Cloud 13 spotlight session, a series of round tables will be held. As this is an 'open session', starting practice-based researchers can 'jump in' and share, test and explore their current research ideas, ambitions and dilemma's with peers. The round tables are being supervised or guided by more experienced researchers from the EAPRIL network. The session offers participants a low threshold opportunity to explore and present their current research ideas, deepen their knowledge on practice-based research methodology as well as finding their way into becoming a practice-based researcher.

#### **CLOUD 13 - Jump in!: round tables on research ideas and designs**

**Presenting Author:**Pieter Seunke, Aeres University of Applied Sciences Wageningen, Netherlands

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#### **Sessions E 4**

24 November 2022 10:45 - 12:15

GWW1 - (0).16

EAPRIL Spotlight Session

Higher education

#### **Developing professional identity as condition for life long development**

**Keywords:** Higher education, Professional Development, Professional identity, Teaching approaches

**Interest group:** CLOUD 03 - Strategies to improve teaching and learning environments

In this symposium, we focus on professional identity development in higher education as an important condition for continuous professional learning. Professional identity is defined by many scholars for example as "what connects inalienably: who you are (person), the work you do (profession) and the context in which you shape it" (Ruijters & Simons, 2020). Also, research indicates the importance of the relation between professional identity and agency (Beijaard et al., 2004). Agency is practiced when professionals exert influence, make choices and take stances in ways that affect their professional identities (Eteläpelto et al., 2013). This quality is especially relevant in response to urgent problems in today's society, as sustainability and inequality. In this symposium we will present professional identity development in relation to life-long learning by elaborating on different practices in HET. These will focus on the 'how' and 'why' of professional development in HE: enhancing agency in learning labs (teacher education), personal leadership in learning and development education, skills for global change (bachelor international social work), and transformational leadership (master circular economy). Interactivity is guaranteed by the involvement of students and collaboration between the different disciplines, as by actively reaching out to the participants by using digital learning tools.

#### **Developing professional identity as condition for life long development**

**Presenting Author:**Helma Oolbekkink, HAN University of Applied Sciences, Netherlands; **Presenting Author:**Mechteld Lengkeek, Hogeschool van Arnhem en Nijmegen (HAN), Netherlands; **Presenting Author:**Franceina van Zalk, HAN University Nijmegen, Netherlands; **Presenting Author:**Samantha Graus, HAN University of Applied Sciences, Netherlands

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#### **Sessions E 5**

24 November 2022 10:45 - 12:15

GWW1 - (0).09

Case study

Higher education

### **Practitioner Research in Different Contexts**

**Keywords:** Assessment and evaluation, Competence-based education, Cooperative learning, Educational Effectiveness and quality of education, Higher education, Inclusivity, Knowledge Building and Development, Self-regulation and self-regulated learning

**Interest group:** CLOUD 03 - Strategies to improve teaching and learning environments

**Chairperson:** Karl-Heinz Pogner, Copenhagen Business School, Denmark

### **Developing citizenship skills through cultural heritage and social networks**

**Keywords:** Competence-based education, Cooperative learning, Educational Effectiveness and quality of education, Inclusivity

**Presenting Author:** Sofia Bosatelli, University of Milano-Bicocca, Italy; **Co-Author:** Claudia Fredella, Università degli Studi di Milano Bicocca, Italy; **Co-Author:** Maria Elena Colombo, Università Cattolica del Sacro Cuore, Italy; **Co-Author:** Cristina De Michele, Università degli Studi di Milano-Bicocca, Italy; **Co-Author:** Germana Mosconi, Università degli Studi di Milano-Bicocca, Italy; **Co-Author:** Silvia Negri, Periplo - Studio di consulenza, progettazione e ricerca educativa, Italy

This research concerns an educational project carried out with 5th-6th grade students that, starting from an analysis of the context's needs, tackled the issue of citizenship from an intercultural and interdisciplinary perspective, with a specific focus on heritage education and the promotion of an aware use of social networks. The project addressed socially vivid matters arising from the schools' social environment, such as problems of relationships between students, isolation, lack of understanding of the rules of democratic coexistence, and the assumption of responsibility for the common good, issues that have become even more urgent during the Covid-19 pandemic. The project was monitored and evaluated using the participatory and 'fourth generation' evaluation approach, aimed at enhancing the subjectivity of the participants, activating a reflexive comparison between them and providing useful evidence for redesigning similar actions. This contribution focuses on the student's learning outcomes, both disciplinary and transversal. The analysis of the transcripts of the classroom activity recordings has been carried out with a coding system, informed by constructivist grounded theory and developed through the researchers' intersubjectivity. The results show a strengthening of students' civic skills, taking responsibility for common heritage, and inhabiting digital environments.

### **Student Agency Shapes Intercultural Project**

**Keywords:** Assessment and evaluation, Higher education, Knowledge Building and Development, Self-regulation and self-regulated learning

**Presenting Author:** Joris Boonen, Zuyd University of Applied Sciences, Belgium; **Presenting Author:** Marlene Bradbury, Zuyd University of Applied Sciences, Netherlands; **Co-Author:** Ankie Hoefnagels, Zuyd University of Applied Sciences, Netherlands

Oriental Languages & Communication (Zuyd University, Maastricht) is an internationally oriented bachelor focused on China, Japan and the Arab world. Due to Covid-restrictions preventing a study abroad, alternative intercultural programmes were designed to allow students to practise their intercultural skills in a local context. One such programme required 65 third and fourth-year students to explore intercultural topics in the "Euregion Meuse-Rhine": Belgium, Germany and the Netherlands. To engage students, student agency was employed by allowing students to decide on how they could augment their intercultural knowledge and in which form they would present that knowledge. Students were also required to contribute towards either the content of the programme or society by, for example, co-organizing an educational activity or engaging in volunteer work. In addition, students **participated in five one-day educational activities involving both the professional field, municipality and education**. Students were enthusiastic with the high degree of autonomy and responsibility to co-create their own program and decide on their own deliverables. Furthermore, the programme allowed scope for the range of diverse learning styles and presented students with the opportunity to regulate the learning themselves according to their needs and interests, whilst reaching the learning goals of this programme.

### **Sessions E 6**

24 November 2022 10:45 - 12:15

GW11 - (1).20

Present & Discuss

Higher education, Primary education

### **Improving Learning & Teaching**

**Keywords:** 21st century learning, Collaborative Learning, Educational Effectiveness and quality of education, Higher education, Innovations in education, Peer Interaction / learning, Primary school education, Secondary school education, STEM, Teaching approaches

**Interest group:** CLOUD 03 - Strategies to improve teaching and learning environments, CLOUD 04 - Improving learning and well-being

**Chairperson:** Jiajia Li, VU University Amsterdam / LEARN! Institute, Netherlands

### **Learning to understand digitality? A motivational student perspective on what is taught at school**

**Keywords:** 21st century learning, Primary school education, Secondary school education, STEM

**Presenting Author:** Alexander Koch, University of Teacher Education Fribourg, Switzerland

Digital technology is widely used as an instrument to facilitate learning in an alternative modality. Also, digital education is dominated by competence models for educators and learners. Through a competence focus content is widely neglected in studies that deal with learning and instruction. In this research we investigate what is taught in school that is related to digitalization with reference to technology and engineering understanding and analyze how the topics are perceived by students in terms of interest. We used data from an engineering education study and re-analyzed the quantitative evaluation design with a digital focus. Results show that digital technology is rarely taught as a topic in primary and lower-secondary school, and students show a moderate interest in the topics that were given in the questionnaire. The students were more interested in content that is related to technics and less interested in socio-technical topics. Despite the limitations of having pre-selected items for digital topics, this study may help practitioners and researchers to build instructional scenarios which can be useful in a teaching toward the understanding of technology.

### **Does the earth need a doctor? Stimulating competences in ESD in STEM courses through dialogue**

**Keywords:** 21st century learning, Peer Interaction / learning, STEM, Teaching approaches

**Presenting Author:** Laura Van den Broeck, Odisee University College, Belgium; **Co-Author:** Eef Cornelissen, Odisee University College, Belgium; **Co-Author:** Veerle Verschoren, Odisee University College, Belgium; **Co-Author:** Filip Mennes, Odisee University College, Belgium; **Co-Author:** Steven Raeman, Odisee University College, Belgium; **Co-Author:** Jelle De Schrijver, Antwerp University, Belgium

Education for Sustainable Development (ESD) is playing an increasingly prominent role in curricula. Although many sustainability issues are inherently linked to science and technology, attention to ESD is far from a well-trodden path in Flemish STEM education. In the ongoing "Ecozoo"-project, a teaching method is developed following the principles of design-based research, in co-creation with primary and secondary schools as well as a teacher training program. The goal is to stimulate implementation of ESD among (student) STEM teachers and to increase their didactic skills to address social issues within STEM. We focus upon three competences central in ESD: system thinking (holism, thinking from a large framework), value thinking (pluralism, questioning one's own value framework), and action thinking (sustainability attitude development). As sustainability issues do not have unequivocal answers, the method relies on philosophical teaching methods to let 10- to 14-year-old pupils think about sustainability and STEM. Observations and teacher interviews suggest that this teaching method is promising and stimulates explicit system, value and action thinking. The absence of right and wrong answers stimulates creative and critical thinking. However, the approach poses some challenges, such as the shift from the teachers' role as a knowledge authority to conversation moderator.

### **Effects of high-impact learning practices: A review**

**Keywords:** Collaborative Learning, Educational Effectiveness and quality of education, Higher education, Innovations in education

**Presenting Author:** Simla Arikan Acikgoz, High Impact Learning Academy, Belgium; **Co-Author:** Mien Segers, Maastricht University, Netherlands

While research on high-impact learning continues to expand across various disciplines, it becomes increasingly important to integrate what is already known and achieved. The research questions are: (1) Which effects do single HIPs have? (2) Which effects do LC of HIPs (< 6) have? (3) Which effects do EC of HIPs ( $\geq 6$ ) have? 56 studies were included in the research and narrative analysis was performed. The research showed that among 18 effects of single HIPs, critical thinking, communication and cooperation were the most promoted ones. Also, there were fourteen LC of HIPs having 17 positive effects. Communication, collaboration and career related opportunities were the most common effects of LC of HIPs. Furthermore, 16 positive effects of EC of HIPs can be grouped under five main headings as achievement-focused effects, motivation-focused effects, competence development-focused effects, personal development-focused effects and learning process-focused effects. EC of HIPs have the most competence/skills development-focused effects with their features of developing transformative learning, leadership skills, student and faculty/peer/community interaction, critical thinking, time management and job-readiness skills. To conclude, while HIPs equip learners with field-based knowledge and job readiness skills, HIPs make them competent individuals who can meet the expectations of the rapidly changing world and business life.

#### Sessions E 7

24 November 2022 10:45 - 12:15

GWW1 - (0).10

Present & Discuss

Primary education, Secondary education, Workplace learning

##### Primary & Secondary School Education

**Keywords:** Educational Technology, Innovations in education, Mathematics Education, Primary school education, Professionalisation of educators, Remedial education, Secondary school education, Special Educational needs

**Interest group:** CLOUD 05 - HRD & Workplace learning, CLOUD 06 - Learning in Digital Era: Technology Enhanced Learning

**Chairperson:** Valentin Unger, Switzerland

##### Using Smartpens for Note Taking in Inclusive High School Classes and Future Learning

**Keywords:** Educational Technology, Remedial education, Secondary school education, Special Educational needs

**Presenting Author:** Joseph Boyle, Temple University, United States

From a theoretical perspective, note-taking is a cognitively demanding task for students with learning disabilities (SWLD) in inclusive classrooms. Smartpens are an effective tool to reduce cognitive load in students during lectures. *Research Questions:* Will students who use smartpens perform better on notes and lecture comprehension than students who use conventional paper and pencil note-taking? Will learners of all types who use smartpens perform better on notes and lecture comprehension than students who use conventional paper and pencil note-taking? *Method:* 54 students participated in this study. 17 were SWLD and the remaining 37 students had no disabilities. All students were in 9th grade English Literature inclusion classes. The study used a pre-posttest experimental group design with random assignment. Students were randomly assigned to experimental or control groups. The experimental group students used smartpens during note-taking activities, while students in the control group used their conventional note-taking method. *Results:* Students in the experimental group who used the smartpen strategy for note-taking recorded more lecture points, more words in their notes and outperformed on the test than students in the control group. This study represents the first experimental study to assess the effect of smartpens on student note-taking in inclusive classes.

##### The design process of a questionnaire measuring teachers' innovative behavior

**Keywords:** Innovations in education, Primary school education, Professionalisation of educators, Secondary school education

**Presenting Author:** Stefan Robbers, Open University Netherlands, Netherlands; **Co-Author:** Arnoud Evers, Open Universiteit, Netherlands; **Co-Author:** Marjan Vermeulen, Heerlen Open Universiteit, Netherlands

Teachers Innovative Behavior (TIB), defined as idea generation, idea promotion and idea realization (Janssen, 2003; Thurlings et al., 2015) is important in today's, constantly developing education. Despite the importance, available instruments measuring TIB don't meet the complexity of the TIB concept. This complexity implies TIB, is a form of learning (Lin & Sanders, 2017; Vermeulen, 2016) and can thus, be categorized into subtypes based on how it is pursued, individual or collective and how it takes place, planned or unplanned (Garavan et al., 2015). This leads to the research question: What is the factor structure of this newly developed, comprehensive instrument and is this in line with the definition and the assumed subtypes of TIB? Answering this question, the present study started with a selection by experts of the most suitable items from twelve existing questionnaires. Face-validity was investigated by interviewing three primary and four secondary school teachers. Subsequently, with a sample of primary ( $n=181$ ) and secondary school teachers ( $n=156$ ), the dimensionality of the questionnaire was assessed using exploratory factor analysis. The new questionnaire distinguishes between individual and collective TIB. Within collective a distinction between planned and unplanned TIB was found as well as a distinction of collective idea promotion.

##### Adaptive learning systems in mathematics in primary education

**Keywords:** Educational Technology, Innovations in education, Mathematics Education, Primary school education

**Presenting Author:** Anouk Wezendonk, Marnix Academie (PABO), Netherlands

Over the last decade, the use of adaptive learning systems (ALS) in primary education has been increasing significantly. The first studies into the effects of ALS on mathematics learning outcomes tends to be positive. However, the way in which teachers use ALS varies. Little is known about how teachers can best link their actions to data derived from ALS. It is important to investigate how ALS can be used in such a way that it actually benefits learning. A survey was conducted among 51 primary school teachers. Results from the survey implicate that teachers consult the data derived from ALS in lesson preparation and that they provide students with feedback and help during the lesson, based on this data. Additional qualitative data is being collected by the use of video-stimulated recall interviews to determine how ALS helps teachers in providing didactic feedback and help.

#### Sessions E 8

24 November 2022 10:45 - 12:15

GWW1 - (1).10

Symposium

Higher education

##### HE-Teachers' Attitudes toward Inclusivity

**Keywords:** Diversity, Higher education, Inclusivity, Professional Development, Teacher thinking, Teaching approaches

**Interest group:**

**Chairperson:** Martijn Willemsse, Windesheim University of Applied Sciences, Netherlands

**Discussant:** Nick Gee, Birmingham City University, United Kingdom

In this symposium, we discuss higher education (HE) teachers' views on inclusion and their role in creating inclusive learning environments. Accessible (higher) education is getting more attention in international policy resulting in a more diverse student population. HE institutions must facilitate this diverse student population by creating inclusive learning environments. HE teachers play a key role in this process, but little is known about teachers' views on inclusion and actions they may or may not take. We present three studies shedding light on HE educators' experiences and understandings of inclusion and identifying practical approaches for HE-teachers to create more inclusive learning environments. The first study is a systematic literature review of HE teachers' views and approaches to inclusion, offering insights from previous studies for practice but showing a lack of research on HE teachers' definition of inclusion. The second study is a narrative multi-perspective review, mapping the most important themes in HE of the moment on which action should be taken. The final study

conducted focus group interviews with HE-teachers and a survey at one college. Contributing to a sense of belonging for students was found to be particularly important. While dialogue on views, curriculum, or pedagogy is lacking.

#### **HE-teachers experiences with, views toward, and best practices in inclusivity in HE**

**Presenting Author:**Tisja Korthals Altes, Windesheim University of Applied Sciences, Netherlands; **Co-Author:**Martijn Willemse, Windesheim University of Applied Sciences, Netherlands; **Co-Author:**Sui Lin Goei, Windesheim University of Applied Sciences, Netherlands

Since the 1990s, inclusive education gains attention but higher education (HE) is underrepresented in the literature on inclusive education. Literature does show that HE-teachers are a key factor in creating inclusive learning environments. However, it is unclear how HE-teachers view inclusivity and an overview of best practices is lacking. In this systematic literature review, we shed a light on HE-teachers' approaches to inclusivity by answering the following question: *What are HE teachers' views, attitudes, and teaching experiences toward inclusivity?* We included 51 peer-reviewed academic articles published between 2011 and 2021. These were thematically analyzed on 'teachers' views/roles', 'didactical examples', 'barriers', and 'best practices'. The results show a wide variety of interest in the topic. Seen in the variety of student-groups articles focus on, the used research methods, and the location of the research. The findings also illustrate that HE-teachers' definition of inclusive education is rarely discussed. When describing HE-teachers' views on inclusivity, it is often about the characteristics of an inclusive HE-teacher, which includes self-efficacy (gained through experience) and awareness of inclusivity. Gathered best practices center around activities to get to know your students, be open for input from your students, and diversifying teaching methods, resources, and assessment.

#### **Creating diverse-sensitive higher education through a CoP: a narrative multi-perspective review.**

**Presenting Author:**Elke Emmers, Universiteit Hasselt, Belgium; **Presenting Author:**Reinhilde Pulinx, University College Leuven -Limburg, Belgium; **Co-Author:**Mieke Schrooten, Odisee University College, Belgium

This contribution is about the implementation of a narrative multi-perspective review as a means of achieving quality and inclusive higher education (HE) for all students. The study is situated in Flanders, Belgium, where diversity in HE is increasing but access for certain social groups remains limited and drop-out rates high. A community of practice (CoP) was created, grouping together HE professionals with a shared interest in bringing about a diversity-sensitive higher education. The CoP combined the exchange of good practices, guidelines, and strategies to counteract inequalities in HE regarding inclusion and developed into a community of experts and practitioners in which knowledge diffusion was prioritized. The CoP created a narrative review that is multi-perspective, for each diversity theme always combining an evidence-informed and a practice-informed perspective. This method was applied to seven selected themes, including multilingualism, racism, and diversity in the curriculum. The narrative review was then valorized into a book that can serve as a physical reference to counteract indecisiveness and ignorance and unwillingness to act. The book also includes recommendations for follow-up research and policy and practice enhancement.

#### **Contributing to Inclusive HE Programs: HE-Teachers' Views on Inclusive Teaching Practices**

**Presenting Author:**Martijn Willemse, Windesheim University of applied sciences, Netherlands; **Co-Author:**Monique Ridder, Windesheim University of Applied Sciences, Netherlands; **Co-Author:**Thijs Hemmer, Windesheim University of Applied Sciences, Netherlands; **Co-Author:**Jarise Kaskens, Windesheim University of Applied Sciences, Netherlands; **Co-Author:**Fer Boei, Windesheim University of Applied Sciences, Netherlands; **Co-Author:**Sui Lin Goei, Windesheim University of Applied Sciences, Netherlands

This study is conducted at one University of Applied Sciences, aiming to explore HE-teachers' views and experiences on inclusivity. Nowadays inclusion is a buzzword in HE. However, perspectives on inclusion and what inclusive HE should look like, vary. Given the variety of perspectives on inclusive HE, HE-teachers' views on inclusive programs might differ too. Unfortunately, research on this matter is scarce. Therefore, nine online focus group interviews with in total 45 HE-teachers were organized to study HE-teachers' views and experiences. In addition, a survey was sent to HE-teachers of one university. The central questions of this study were *How do HE teachers define Inclusive HE, what competencies do they consider necessary and which challenges do they discern as contributing to inclusive practices?* The need for support for every student's development regardless of their background, appearance, or special needs was emphasized in all group interviews. Supporting students' sense of belonging is considered most important. In most groups, HE-teachers also distinguished the need for a positive attitude towards inclusion. HE-teachers emphasized a lack of collaboration among faculty members about their own or shared inclusive teaching practices, including a lack of discussion on how to improve their programs and to use suitable pedagogics.

#### **Sessions E 9**

24 November 2022 10:45 - 12:15

GWW1 - (1).18

Workshop

Higher education

#### **Crossing the boundary in UAS and VE institutes: serendipity or intentional?**

**Keywords:** Higher education, Innovations in education, Practice-based research (methodology), Vocational education

**Interest group:** CLOUD 11 - Practice-based Research Methodology

For several years, research groups of one Vocational Education institute (VE) and three Universities of Applied Sciences (UAS) collaborate in the design of tools and interventions aimed at facilitating multistakeholder teams that develop learning environments at the boundary of school and work. These four research groups build upon the same theoretical typology to describe boundary crossing practices (Bouw et al., 2019). We are embedded in a national network consisting of approximately 80 researchers from various knowledge institutes (VE-institutes, UAS and research universities) in the Netherlands, focussing on boundary crossing at the school-work boundary. Network meetings all have a similar set-up inspired by the learning mechanisms of boundary crossing (Akkerman & Bakker, 2011). All researchers of this network carry out research in local contexts and come together for 'knowledge creation' (Van Aalst, 2009). The topic of this workshop is our multi-layered approach to research: local research of one research group knowledge creation between four research groups knowledge creation with a nationwide network

#### **Crossing the boundary in UAS and VE institutes: serendipity or intentional?**

**Presenting Author:**Maria Custers, ELAN, University of Twente, Netherlands; **Presenting Author:**Tjark Huizinga, Saxion University of Applied Sciences, Netherlands; **Presenting Author:**Jantje Timmerman, mboRijnland, Netherlands; **Presenting Author:**Kathinka van Doesum, mboRijnland - Practoraat Research Lab, Netherlands; **Presenting Author:**Ilya Zitter, Hogeschool Utrecht (University of Applied Sciences Utrecht), Netherlands

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#### **Sessions E 10**

24 November 2022 10:45 - 12:15

GWW1 - (1).13

Workshop

Vocational education

### Enhancing cultural awareness by discussing literature with your students

**Keywords:** Beliefs and conceptions of teaching, Continuing professional development in Teachers, Culture and Education, Language Education

**Interest group:** CLOUD 01 - Teacher education

This workshop examines how teacher educators and teachers can develop competence in culturally responsive teaching by engaging with literary texts. We will critically discuss two short stories and several poems together and address themes such as emotional development, inclusivity, culture and cooperative learning. Referring to short stories and poems I will argue that the theme of "the other" can act as a tool to promote intercultural competence. Finally, I will present the practical outcomes of our interdisciplinary research project on world literature at Fontys University of Applied Sciences To induce change in teachers' thinking they should first become aware of their own beliefs. A thought-provoking and dynamic workshop for teachers who want to do more than 'just teach'. I invite teachers who are willing to risk teaching from the heart, and who would like to facilitate powerful lessons that give students greater self-awareness, increased self-efficacy and a sense of purpose. Explore, experiment and play with courage in an atmosphere of honesty, creative risk-taking, and powerful storytelling.

(164)

### Enhancing cultural awareness by discussing literature with your students

**Presenting Author:**Barbara Roosken, Fontys University of Applied Sciences, Netherlands

This workshop examines how teacher educators and teachers can develop competence in culturally responsive teaching by engaging with literary texts. We will critically discuss two short stories and several poems together and address themes such as emotional development, inclusivity, culture and cooperative learning. Referring to short stories and poems I will argue that the theme of "the other" can act as a tool to promote intercultural competence. Finally, I will present the practical outcomes of our interdisciplinary research project on world literature at Fontys University of Applied Sciences To induce change in teachers' thinking they should first become aware of their own beliefs. A thought-provoking and dynamic workshop for teachers who want to do more than 'just teach'. I invite teachers who are willing to risk teaching from the heart, and who would like to facilitate powerful lessons that give students greater self-awareness, increased self-efficacy and a sense of purpose. Explore, experiment and play with courage in an atmosphere of honesty, creative risk-taking, and powerful storytelling.

(164)

### Sessions E 11

24 November 2022 10:45 - 12:15

GWW1 - (0).11

Workshop

Higher education

### Approaches to presence, emotion and interaction in digital learning contexts

**Keywords:** In-service Teacher Training, Initial Teacher Education (Pre-service), Instructional Design and Instructional Strategies, Interaction and discourse in education

**Interest group:** CLOUD 03 - Strategies to improve teaching and learning environments

The COVID pandemic has increased the need for distance and online learning. Interaction and presence in digital environments are mediated by technologies, and preconditioned by a complex mesh of affordances, technical skills, and pedagogical competences. Teachers' awareness on and skills to promote emotional agency, non-verbal immediacy and dialogue are vital in meaningful online learning. Interaction is key in collaborative learning, and especially social and emotional presence can help fight the sense of isolation common during the pandemic. Interaction can contribute to general well-being of the students and improve their learning results. The ability to reflect, in turn, is key in developing one's skills and competence as a teacher and learner. In this workshop we will explore interaction, emotions and presence when teaching and learning in digital environments. The workshop offers a short introduction to the theories and practical findings from an ongoing R&D project TOVE. Participants will work collaboratively to share insights from their own work, identify development needs, and discuss opportunities for strengthening their own and their students' competence. As a result, we will create a collection of insights and practices that benefit teachers, teacher trainers and students, and researchers in approaching emotions, presence, and interaction in digital environments.

### Approaches to presence, emotion and interaction in digital learning contexts

**Presenting Author:**Ilona Laakkonen, JAMK University of Applied Sciences, Finland; **Presenting Author:**Sirpa Laitinen-Väänänen, JAMK University of Applied Sciences, Finland; **Co-Author:**Piia Naykki, University of Jyväskylä, Finland; **Co-Author:**Tapio Toivanen, Helsinki University, Finland; **Co-Author:**Tuula Nousiainen, University of Jyväskylä, Finland; **Co-Author:**Riikka Michelsson, JAMK University of Applied Sciences, Finland

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### Sessions E 12

24 November 2022 10:45 - 12:15

GWW1 - (1).08

Workshop

Primary education

### Developing Questioning Literacy with the Question Compass

**Keywords:** Continuing professional development in Teachers, Innovations in education, Inquiry learning, Lifelong Learning

**Interest group:** CLOUD 03 - Strategies to improve teaching and learning environments

Student questioning is an important self-regulative strategy which has multiple benefits for teaching and learning. Teachers, however, need support to help students to develop their questioning literacy. In this workshop participants will be introduced to the Question Compass, a visual representation of the concept of Hypothetical Question Trajectories. The Question Compass aims to develop questioning literacy by exploring possible questions from the perspectives of various research methodologies and learning outcomes. The hypothesis was that by exploring Hypothetical Question Trajectories, teachers would be better able to anticipate on potential student questioning and to encourage students to raise relevant, feasible questions which contribute to deeper understanding of the topic under study. To test the hypothesis, the Question Compass was tested in primary classrooms by 30 teachers, ranging from Kindergarten to Grade 6. In this highly interactive workshop an hands-on experience with the Question Compass will be alternated with the presentation of the outcomes of practice based studies and the discussion of the potential of Hypothetical Question Trajectories for various educational domains.

### Developing Questioning Literacy with the Question Compass

**Presenting Author:**Harry Stokhof, HAN University of Applied Sciences, Netherlands

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students to develop their questioning literacy. In this workshop participants will be introduced to the Question Compass, a visual representation of the concept of Hypothetical Question Trajectories. The Question Compass aims to develop questioning literacy by exploring possible questions from the perspectives of various research methodologies and learning outcomes. The hypothesis was that by exploring Hypothetical Question Trajectories, teachers would be better able to anticipate on potential student questioning and to encourage students to raise relevant, feasible questions which contribute to deeper understanding of the topic under study. To test the hypothesis, the Question Compass was tested in primary classrooms by 30 teachers, ranging from Kindergarten to Grade 6. In this highly interactive workshop an hands-on experience with the Question Compass will be alternated with the presentation of the outcomes of practice based studies and the discussion of the potential of Hypothetical Question Trajectories for various educational domains.

### Sessions E 13

24 November 2022 10:45 - 12:15

GWW1 - (-1).14

Workshop

Higher education

#### Discover your PUNC (Professional UNcertainty Competence)!

**Keywords:** Higher education, Professional Development, Professionalisation of educators, Self-regulation and self-regulated learning

**Interest group:** CLOUD 04 - Improving learning and well-being

We live and work in a VUCA society: volatile, uncertain, complex, ambiguous. This demands professionals that can handle rapid change, high-risk choice making and the uncertainty that accompanies this. In order to help professionals to develop the ability to deal with professional uncertainty productively, 6 European educational institutes developed the Professional UNcertainty Competence: PUNC. This workshop aims to share knowledge and tools of the PUNC Framework with attending educational professionals and to facilitate them to apply this in their daily 'VUCA' educational practice. In this workshop the attendees will get acquainted with the PUNC competence and learn to use the PUNC method of 'acknowledgment, exploration and handling' in order to make their uncertainty productive. By experiencing the working of the PUNC method, they will be able to use it in their own educational practice.

#### Discover your PUNC (Professional UNcertainty Competence)!

**Presenting Author:**Stijn Bollinger, Hogeschool Utrecht (University of Applied Sciences Utrecht), Netherlands; **Presenting Author:**Ritie van Rooijen, Hogeschool Utrecht, Netherlands

We live and work in a VUCA society: volatile, uncertain, complex, ambiguous. This demands professionals that can handle rapid change, high-risk choice making and the uncertainty that accompanies this. In order to help professionals to develop the ability to deal with professional uncertainty productively, 6 European educational institutes developed the Professional UNcertainty Competence: PUNC. This workshop aims to share knowledge and tools of the PUNC Framework with attending educational professionals and to facilitate them to apply this in their daily 'VUCA' educational practice. In this workshop the attendees will get acquainted with the PUNC competence and learn to use the PUNC method of 'acknowledgment, exploration and handling' in order to make their uncertainty productive. By experiencing the working of the PUNC method, they will be able to use it in their own educational practice.

### Sessions F 1

24 November 2022 13:15 - 14:45

GWW1 - (0).33 Part I

Poster Presentation

Higher education, Primary education

#### Practitioner Research in Higher & Primary Education

**Keywords:** Curricula, Higher education, Innovations in education, Labour market & formal learning, Mentoring, Primary school education, Professional identity, Self-efficacy, Teaching approaches, Work environments

**Interest group:** CLOUD 04 - Improving learning and well-being, CLOUD 13 - Starting Researchers

**Chairperson:** Derk-Jan Nijman, HAN University of Applied Sciences, Netherlands

#### Higher education and work: Academic and professional trajectories of graduates in Education Sciences

**Keywords:** Higher education, Labour market & formal learning, Professional identity, Work environments

**Presenting Author:**Miguel Correia, Faculty of Psychology and Education Sciences of the University of Porto, Portugal; **Co-Author:**Prof. Dr. Henrique Vaz, Faculty of Psychology and Education Sciences of the University of Porto, Portugal

The organization of higher education no longer guarantees an entry into active life, it no longer establishes a transition from a training situation to a stable employment, but tends to establish instability (Correia, 1996a). Thus, the current study pursues the enrichment of pedagogical practices in Educational Sciences teaching at the University of Porto, as it searches to understand the scope of graduate's professional action by systematizing their academic and professional trajectories to reflect on the relationship between higher education and work. For this purpose, 21 semi-structured interviews (Moreira, 2007) were conducted with graduates to construct sociological portraits (Lahire, 2003). Subsequently, content analysis (Amado, 2017) was carried out and three categories were chosen for further analyses: academic trajectories, subjective value of training, and professional trajectories. From here, it was possible to systematize a series of ideal-types (Weber, 1983) related to academic (linear, specialization, reformulation and reconstruction) and professional (continuity paths – linear, irregular, and disqualifying – and discontinuity paths – deliberated and induced) trajectories. Overall, the relationship between these two areas is built on a myriad of institutions and decisions that are either based on the perception of individual merit, or on the person's socioeconomic circumstances. This leads to profound implications regarding pedagogical practices.

#### Children as change agents

**Keywords:** Curricula, Primary school education, Self-efficacy, Teaching approaches

**Presenting Author:**Marijke van Voorthuisen, Marnix Academie (PABO), Netherlands; **Co-Author:**Elizabeth Rigg, Marnix Academie (PABO), Netherlands; **Co-Author:**Stella van der Wal-Maris, Marnix Academie, University of Applied Sciences, Netherlands

*Primary schools face the challenge of preparing children to participate in and create a better world. One way to do this is by providing Social Entrepreneurship Education (SEE). SEE connects children with the real world and with issues in the field of sustainable development and stimulates them to be change-agents.*

*The central question in the presented research was what, in the perception of primary school teachers, characterizes (elements of) SEE. The results of this qualitative, exploratory research include: teachers relate (elements of) SEE to 'engagement' in the mission statement and vision of the school, to a learning environment that characterizes itself by 'learning by doing' and reflecting and to a 'whole school approach'.*

#### How can we support a student in making a well-informed choice within a flexible curriculum?

**Keywords:** Curricula, Higher education, Innovations in education, Mentoring

**Presenting Author:**Johan Smarius, Avans Hogeschool / Avans University of Applied Sciences, Netherlands; **Co-Author:**Esther van der Stappen, Avans University of Applied Sciences, Netherlands; **Co-Author:**Suzan van Brussel, Avans University of Applied Sciences, Netherlands

In future education, students will have more freedom to choose what courses they want to take. Making a well-informed choice from a lot of possible courses is difficult, because it requires the processing of a lot of, sometimes hard to find, information. To help students with this choice, research has been conducted with the following central question: "How can we support a student in making an autonomous well-informed choice within a flexible curriculum?". The goal of this study is to develop an evidence-informed digital tool that can support students in their exploration of the collection of offered elective courses. To this aim, we

conducted a mixed method study: based on an exploratory literature review and seven semi-structured interviews, we synthesized success criteria and design principles for such a digital support tool, which guided the subsequent development of a prototype by a student team. Specifically, this tool should support students during the phase 'orientation in breadth' and 'orientation in depth' of the dual cycle model of Zimmerman et al. The prototype will be tested and evaluated for usability and fit-for-purpose for supporting a student in making a well-informed choice during a simulation.

## Sessions F 2

24 November 2022 13:15 - 14:45

GWW1 - (0).33 Part II

Poster Presentation

Higher education

### Beliefs and conceptions of learning in Higher Education

**Keywords:** Beliefs and conceptions of learning, Beliefs and conceptions of teaching, Blended learning, Cognitive Skills & Development, Higher education, Professionalisation of educators, STEM

**Interest group:** CLOUD 03 - Strategies to improve teaching and learning environments, CLOUD 11 - Practice-based Research Methodology

**Chairperson:** Esther van der Stappen, Avans university of applied sciences, Netherlands

### Student Perceptions of Knowledge Transfer: Augmenting a Graduate Educational Psychology Program

**Keywords:** Beliefs and conceptions of learning, Beliefs and conceptions of teaching, Cognitive Skills & Development, Higher education

**Presenting Author:** BOBBY HOFFMAN, University of Central Florida, United States

Knowledge transfer is the "ultimate aim of teaching" (McKeough et al., 2013, p. 1). Although researchers thoroughly examine the importance of teaching for transfer, how transfer is accomplished and assessed, and the relationship between transfer and academic achievement, minimal research investigates student perceptions of knowledge transfer. As such, a grounded theory, qualitative methodology employing open, axial, and selective coding was used to determine graduate student insights concerning knowledge transfer, which pedagogical and design elements learners assume cultivate knowledge transfer, and precisely how learners believe transfer of course knowledge mediates applied learning, motivational, and teaching challenges. Results analysis revealed variance among student and research conceptions of transfer, including variable descriptions and application of transfer when applying source knowledge to solve target problems. Suggestions for cultivating transfer in graduate education are advanced.

### What's on teachers' minds? Teachers' helping and hindering beliefs about blended education

**Keywords:** Beliefs and conceptions of teaching, Blended learning, Higher education, Professionalisation of educators

**Presenting Author:** Mariola Gremmen, Avans Hogeschool / Avans University of Applied Sciences, Netherlands; **Co-Author:** Esther van der Stappen, Avans University of Applied Sciences, Netherlands

Nowadays, blended education is one of the main spearheads of higher education institutions. The event of the COVID-19 pandemic accelerated the need to reconsider current educational practices and initiate innovations based on new experiences with digital learning activities, and both synchronous and asynchronous learning. Greater understanding of teachers' helping and hindering beliefs about blended education and insights in their mindset provides relevant information to support them in redesigning their educational practices. Therefore the main research question is: What are teachers' helping and hindering beliefs about blended education? In fifteen semi-structured interviews, teachers were asked about their ideas about, experiences of, and needs concerning blended education. Preliminary results show, among others, that teachers are passionate about education, underline the relevance of face-to-face interactions, and are willing to consider more blended ways of education. However, there is a need for professionalization around motivating students, fitting learning activities in line with their teaching goals, and learning with and from each other. These results can be directly used in educational practices, by starting with a blended learning strategy and offering time and space, by stimulating a learning culture and by supporting teachers around specific didactical and pedagogical themes.

### CHAT Analysis Relating TAs' Tutorial Activities to their Perspectives about Teaching and Learning

**Keywords:** Beliefs and conceptions of learning, Beliefs and conceptions of teaching, Higher education, STEM

**Presenting Author:** May Lee, Rijksuniversiteit Groningen, Netherlands

The quality of undergraduate physics education is influenced by students' interactions with their teaching assistants (TAs), which is concerning given that TAs often do not receive training on how to teach. The TAs' teaching activities are informed by their perspectives about teaching and learning, but little is known about those perspectives and how those perspectives relate to teaching activities. To investigate these issues, I used a qualitative multiple case study design that included interviewing three TAs and making field notes and video-recordings of those TAs' tutorials for the first four weeks of an introductory physics course. I used cultural historical activity theory—a framework that focuses on relationships between people, tools, and goals within an activity system (e.g., tutorial)—to analyze the data and found that while the TAs perceived the same set of rules, their usage of tools, perceived divisions of labor, and stated objectives differed from each other. These differences corresponded to their teaching activities, which were characterized with respect to three pedagogical modes: consultation, participation, and instruction. Findings suggest that professional development for TAs is needed to support higher quality undergraduate physics education, and should revolve around TAs' perceptions of teaching and learning.

## Sessions F 3

24 November 2022 13:15 - 14:45

GWW1 - (0).33 Part III

Poster Presentation

Higher education, Vocational education

### Practitioner Research in Vocational & Higher Education

**Keywords:** 21st century learning, At-risk students, Distance Education, Equality / Education for All, Mentoring, Practice-based research (methodology), Professional Development, Self-regulation and self-regulated learning, Tutoring, Vocational education

**Interest group:** CLOUD 02 - Educators' professional development, CLOUD 03 - Strategies to improve teaching and learning environments

**Chairperson:** Bram Pynoo, Belgium

### Developing online and distance learning in Nepal

**Keywords:** 21st century learning, At-risk students, Distance Education, Equality / Education for All

**Presenting Author:** Graham Burns, JAMK University of Applied Sciences, Finland; **Co-Author:** Dr. Bed Prasad Dhakal, Tribhuvan University, Nepal; **Co-Author:** Dr. Jeevan Khanal, Nepal Open University, Nepal

The outcome of the project is *strengthened capacity of Tribhuvan University (TU), and Nepal Open University (NOU) to develop and implement further Open and Distance Learning (ODL) along with the digital pedagogy programmes, provide teachers with modern pedagogical skills including guidance and counselling, and empowering local governments to design and implement local curriculum integrating ICT skills and 21<sup>st</sup> century skills.* The project contributes to the long-term development plans of TU and NOU. TU's vision 2030 states to integrate technology in teaching and learning; ensure that faculty members are trained to develop materials, use teaching aids and integrate technology in their respective subjects. Similarly, NOU's mission is to increase the access and participation of those youths who are deprived of higher education due to the limitations associated with traditional education programmes. Thus, this particular project is needed to directly address the institutional needs of the TU and NOU along with the alignment of the policy of the government of Nepal to prepare quality teaching workforce equipped with digital pedagogy and 21<sup>st</sup> century skills.

### Snapshot of VET teachers' digi-pedagogical competences

**Keywords:** Distance Education, Practice-based research (methodology), Professional Development, Vocational education

**Presenting Author:**Eila Burns, JAMK University of Applied Sciences, Jyväskylä, Finland; **Co-Author:**Riia Palmqvist, JAMK University of Applied Sciences, Finland

The vocational education and training (VET) sector plays an important role in digitalisation of education by being tightly intertwined in educating skilled employees for the future jobs. Thus, VET teachers are faced with constant requirements of upskilling their competences posed by digitalised education. This study focuses on mapping VET teachers' existing knowledge and experiences in digital pedagogy and identifying gaps in them, as well as needs for upskilling their competences. This research is based on a situational analysis for the Smooth Online Working for VET Providers (SHOW-VET) international project among VET organisations in four European countries. The research questions have been formulated as follows: 1. What is the current situation of VET teachers' digi-pedagogical competences in selected vocational fields? 2. What are the needs for VET teachers to upskill their digi-pedagogical competences? 3. What are the possible relationships between VET teachers' profiles and their digi-pedagogical competences? Data were collected in March and April 2022 through a voluntary online survey completed by VET teachers n= 218 in four European countries. The preliminary analysis indicates VET teachers being fairly aware of their technical digital skills, but less confident in integrating engaging, learner-centred pedagogies in digital environments.

### Study self-direction

**Keywords:** 21st century learning, Mentoring, Self-regulation and self-regulated learning, Tutoring

**Presenting Author:**Jarno Oost, HAN University Nijmegen, Netherlands

### Introduction

The backbone of our part-time education is ownership of the learning process by the student. The student finishes parts of the curriculum by demonstrating the mastery of learning outcomes. Learning outcomes define the output of the learning process and are the student chooses which learning activities fits the learning process in the specific situation of the student (e.g. based on previous education, training, work experience).

It is therefore important that the student is capable of asking questions regarding his/her learning process and is able to be skilled in leadership and self-directive studying. If the student is not able to do this, the risk of dropping-out increases. Previous research is already executed on what actions can reduce the chance on dropping-out. For example decreasing the gap between intermediate and higher vocational education. These studies underpin the following central question: *How can students gain insight into their own degree of self-directed learning in an higher educational context?*

### Sessions F 4

24 November 2022 13:15 - 14:45

GW11 - (0).33 Part IV

Poster Presentation

Primary education, Secondary education

### Practice-based Research Methodology

**Keywords:** Culture and Education, Deep-level and profound learning, Diversity, Doctoral education (PhD education), History education, Language Education, Learning and neuroscience, Meta-cognition and metacognitive learning, Practice-based research (methodology), Secondary school education

**Interest group:** CLOUD 04 - Improving learning and well-being, CLOUD 07 - Research impact on school development, CLOUD 11 - Practice-based Research Methodology

**Chairperson:** Joost Seijsener, HAN University Nijmegen, Netherlands

### The Effectiveness of a New Approach to Lecture Note-Taking Instruction

**Keywords:** Deep-level and profound learning, Meta-cognition and metacognitive learning, Practice-based research (methodology), Secondary school education

**Presenting Author:**Mengsi Liu, The University of Tokyo, Japan; **Co-Author:**Haruka Uetake, The University of Tokyo, Japan

Instruction on lecture note-taking in the classroom is essential, but there has been little discussion about specific instruction for facilitating learning in class. This study aimed to investigate the effectiveness of the note-taking instruction that considers students' mental effort. In this new approach, students were given specific instructions on what to write down and asked to take notes directly in their textbooks. Data were collected from 7th to 9th graders (n=36) who used a learning support facility for low-income families. This poster presentation focuses on one session, which the second author conducted. Students' actual notebooks and pre- and post-intervention interview data were analyzed in order to examine the impact of the note-taking instruction lecture. As a result, four of the seven students were found to have changed lecture note-taking activities or beliefs. However, nearly half of the students did not show any changes. It was found that they did not change their note-taking strategies because they did not recognize the effects of note-taking for their comprehension or paid more attention to the form of information rather than its contents. Furthermore, implications drawn out from these findings were discussed.

### Main difficulties of Spanish children with dyslexia learning English... (CANCELLED)

**Keywords:** Diversity, Language Education, Learning and neuroscience, Practice-based research (methodology)

**Presenting Author:**Paz Suarez-Coalla, University of Oviedo, Spain. CIF: Q33180011, Spain; **Co-Author:**Marina Vega Harwood, University of Oviedo, Spain;

**Co-Author:**Raquel Imaz, University of Oviedo, Spain; **Co-Author:**Cristina Martínez García, Universidad Oberta de Cataluña, Spain

The problems manifested by people with dyslexia have a phonological character. This deficit leads to difficulties in reading, writing and in other areas of language. Learning a foreign language (FL) is a challenge for them, since dyslexia affects the ability to process language. The objective of the study was to know the main difficulties that Spanish children with dyslexia present learning English as FL. Thirty-six Spanish children participated in the study (18 with dyslexia); and eleven English teachers from FL who teach children with dyslexia. The children completed several tasks: reading, writing, lexical decision, and translation. The teachers filled out a questionnaire about the performance in English of children with dyslexia, according to their perception. The results of the tasks showed, in addition to reading and writing difficulties, a lower level of vocabulary compared to the control group. The results indicated a low performance in the group of children with dyslexia, both in accuracy and speed. The results of the teachers' questionnaires confirm the previous data, since their perception is that Spanish children with dyslexia have difficulties in several areas of English development such as FL, in addition to reading and writing.

### Best of both worlds? Methodological reflections of a teacher-researcher engaged in a PhD program

**Keywords:** Culture and Education, Doctoral education (PhD education), History education, Practice-based research (methodology)

**Presenting Author:**Joris Van Doorslaere, Ghent University, Belgium

The professional context of teachers is one of continuous learning and self reflection. Teachers are aided by innovations that are being developed by education scholars. However, considerable literature refers to a gap between the professional practice of teachers and educational research. One of the ways often suggested to bridge the gap is teacher-research. A specific case of teacher-research is research conducted by teachers enrolled in a PhD program. Nevertheless, literature on this topic remains scarce. The context of this study is a six-year doctoral project on history didactics in the formal educational system in Flanders. Positioned on the one hand as a halftime history teacher, and on the other hand as a researcher in an academic context, I find myself at the intersection of two different worlds. Based on the theoretical framework, I formulated the following research question: What are methodological design principles for teacher-research engaged in PhD research? The main aim is to apply the design principles to the development of a methodology that proves useful as a



framework during my practitioner research. To answer the research question, I make use of an integrated literature review. This poster presents the methodological reflections that build up toward such a framework.

## Sessions F 5

24 November 2022 13:15 - 14:45

GWW1 - (0).33 Part V

Poster Presentation

Higher education

### Innovations in Education

**Keywords:** Collaborative Learning, Educational Effectiveness and quality of education, Educational Technology, Higher education, Innovations in education, Instructional Design and Instructional Strategies, Leadership development, Medical & health education, Practice-based research (methodology), Workplace learning

**Interest group:** CLOUD 03 - Strategies to improve teaching and learning environments, CLOUD 12 - Leadership in Education

**Chairperson:** Rachel Verheijen-Tiemstra, Fontys University of Applied Sciences, Netherlands

### Theoretical and practical insights on leadership in educational innovation with ICT

**Keywords:** Educational Technology, Higher education, Innovations in education, Leadership development

**Presenting Author:** Marijn Post, Hogeschool van Arnhem en Nijmegen (HAN), Netherlands; **Co-Author:** Dorien Hopster, University of Twente, Netherlands; **Co-Author:** Kim Schildkamp, University of Twente, Netherlands; **Co-Author:** Pieter Van Rooij, Hogeschool van Arnhem en Nijmegen (HAN), Netherlands; **Co-Author:** Jacob Nouta, Hogeschool Leiden University of Applied Sciences, Netherlands; **Co-Author:** Ronald Spruit, Avans Hogeschool / Avans University of Applied Sciences, Netherlands

*Research shows that leaders within an institution have an important function in initiating, guiding and supporting the process of educational innovation with ICT. This pivot function applies both to formal managers as well as to informal leaders. Although leadership is evidently an important pillar in the process of educational innovation with ICT, it is often unclear to both leaders as well as their subordinate how leaders can use their role in promoting and supporting the process of educational innovation with ICT. For this, we aimed to collect both theoretical and practical insights on the role of leaders in the process of educational innovation with ICT in higher education. To collect theoretical insights we conducted a literature study. To gather practical insights from out the higher education practice we organized several discussion and brainstorm sessions on the topic of leadership with multidisciplinary groups containing both managers, teachers and support staff. We combined the theoretical and the practical insights, to develop a guideline on how leaders can take their role in the process of educational innovation with ICT in higher education. In this poster session we will present both the gathered theoretical and practical insights and the developed guideline.*

### Workplace learning in non-hospital healthcare contexts: a design-based research

**Keywords:** Innovations in education, Medical & health education, Practice-based research (methodology), Workplace learning

**Presenting Author:** Myrthe Verhees, Radboudumc Health Academy, Netherlands; **Co-Author:** Rik Engbers, Radboudumc Health Academy, Netherlands; **Co-Author:** Marjolijn van de Pol, Radboudumc Health Academy, Netherlands; **Co-Author:** Renske Huijbregts, Radboudumc Health Academy, Netherlands; **Co-Author:** Wietske Kuijer-Siebelink, Radboudumc Health Academy / HAN University of Applied Sciences, Netherlands; **Co-Author:** Anneke Landstra, Rijnstate, Netherlands; **Co-Author:** Roland Laan, Radboudumc Health Academy, Netherlands

To better align medical education, healthcare systems, and community healthcare needs, non-hospital healthcare environments are becoming increasingly important workplace learning environments (WLE) for doctors in training. Known methodologies of workplace learning cannot simply be translated from the traditional hospital context to new, complex WLEs outside the hospital. More research on how to promote and support workplace learning in these WLEs is needed. We aimed to answer the research question: how can workplace learning of medical students in WLEs outside hospital contexts be made visible and be supported? We used design-based research (DBR) to develop a 'product' that supports and provides insight into workplace learning in WLEs outside hospital contexts. We studied medical students' internships in WLEs outside the hospital environment. Together with students and supervisors, we developed an app (as our *product*) that facilitates the capturing of 'learning experiences'. This app was iteratively evaluated and adapted in design cycles, which improved our app while also enriched our understanding of workplace learning in these new WLEs. We present our app along with design principles, and present how our insights can contribute to workplace learning and workplace learning support.

### Applying Constructive Alignment for integrating professional skills in online learning practices

**Keywords:** Collaborative Learning, Educational Effectiveness and quality of education, Innovations in education, Instructional Design and Instructional Strategies

**Presenting Author:** Fatemeh Janesarvatan, Maastricht University, Netherlands; **Co-Author:** Maryam Asoodar, Maastricht University, Netherlands

At Maastricht University, a common challenge for international track of medicine (ITM) students is to learn Dutch fluently enough to communicate in the hospital. The purpose of this project was to design a medical-Dutch course based on the constructive alignment approach, by integrating authentic tasks in a meaningful way to improve the language proficiency and communication skills of medical students. In this study, we investigated how students perceived the alignment between the different parts of the course and the tasks they have to do in the real world. In order to evaluate the course based on students' reflections, we invited them to fill out surveys about the course and to participate in semi-structured individual interviews. Results suggested that students perceived the course as valuable for improving professional skills (communication with patients, peers, and colleagues) and language proficiency in terms of having a more fluent and natural dialogue with patients. Students conveyed that the teaching/learning activities and the assignments are aligned with the intended learning objectives. In this course, students actively interacted with peers and instructors; they emphasized the importance of the guidance received from the instructor, and the constructive feedback they received from peers and simulated patients.

## Sessions G 1

24 November 2022 15:15 - 16:45

GWW1 - (0).16

EAPRIL Cloud Spotlight Session

### CLOUD 01 - Spotlight Session Teacher Education

**Keywords:** 21st century learning, Artificial intelligence, Assessment and evaluation, At-risk students

**Interest group:** CLOUD 01 - Teacher education

There is a lot going on in European teacher education. The most important developments/themes are: student teachers' professional (identity) development; student teachers agency; inquiry/research based learning in teacher education; and relation between teacher education institutes and workplace. These four interesting and challenging themes are formulated based on the content of presentations during the last three EAPRIL conference in Cloud 1. Two questions will be dealt with during the first part of the session. We ask ourselves if these are the main themes in teacher education at the moment and are we missing some important and meaningful themes? We also dig into the question 'how are these different themes related to each other, can we develop a frame work in which the five themes are integrated?'. In the second part of the session we deepen the different themes, organising smaller groups. Every group focusses on a theme. Based on the expertise of the participants, and combined with some scientific sources, they will search for a deeper understanding of the theme. Finally, the participants will be encouraged to find similar or inspiring practices which potentially can lead to (future) projects within this cloud.

### CLOUD 01 - Spotlight Session Teacher Education

**Presenting Author:**Tom Adams, Fontys University, Netherlands; **Presenting Author:**Bob Koster, Fontys University of Applied Sciences, Netherlands

There is a lot going on in European teacher education. The most important developments/themes are: student teachers' professional (identity) development; student teachers agency; inquiry/research based learning in teacher education; and relation between teacher education institutes and workplace. These four interesting and challenging themes are formulated based on the content of presentations during the last three EAPRIL conference in Cloud 1. Two questions will be dealt with during the first part of the session. We ask ourselves if these are the main themes in teacher education at the moment and are we missing some important and meaningful themes? We also dig into the question 'how are these different themes related to each other, can we develop a frame work in which the five themes are integrated?'. In the second part of the session we deepen the different themes, organising smaller groups. Every group focusses on a theme. Based on the expertise of the participants, and combined with some scientific sources, they will search for a deeper understanding of the theme. Finally, the participants will be encouraged to find similar or inspiring practices which potentially can lead to (future) projects within this cloud.

## Sessions G 2

24 November 2022 15:15 - 16:45

GWW1 - (1).10

EAPRIL Cloud Spotlight Session

Workplace learning

### CLOUD 5 - Setting directions for Cloud 5 HRD and Workplace Learning

**Keywords:** Continuing professional development in Teachers, Professional Development, Training and Development, Workplace learning

**Interest group:** CLOUD 05 - HRD & Workplace learning

While the title of the cloud suggests that we address only the corporate world, it is important to know that we also understand schools and universities as workplaces where learning can happen. Since we believe that this may be difficult to differentiate from cloud 1 (teacher education) or cloud 14 (learning in organisations), we will start this spotlight session with a short presentation of research connected to our cloud, which gives you an example of our understanding of workplace learning. To get you from the receiving end into a more active role, we will then work in groups on topics about your ideas, trending topics and needs within the cloud and possible new common project ideas. Of course we will afterwards come together as a group to reflect on the results and to set the direction for the future of cloud 5.

### CLOUD 5 - Setting directions for Cloud 5 HRD and Workplace Learning

**Presenting Author:**Arnoud Evers, Open Universiteit, Netherlands; **Co-Author:**Jorg Holle, Westfälische Wilhelms-Universität Münster, Germany

While the title of the cloud suggests that we address only the corporate world, it is important to know that we also understand schools and universities as workplaces where learning can happen. Since we believe that this may be difficult to differentiate from cloud 1 (teacher education) or cloud 14 (learning in organisations), we will start this spotlight session with a short presentation of research connected to our cloud, which gives you an example of our understanding of workplace learning. To get you from the receiving end into a more active role, we will then work in groups on topics about your ideas, trending topics and needs within the cloud and possible new common project ideas. Of course we will afterwards come together as a group to reflect on the results and to set the direction for the future of cloud 5.

## Sessions G 3

24 November 2022 15:15 - 16:45

GWW1 - (0).09

EAPRIL Cloud Spotlight Session

### Shaping Cloud 10 - Education for Sustainability

**Keywords:** 21st century learning, Equality / Education for All, Innovations in education, The role of research on learning and instruction in developing education systems

**Interest group:** CLOUD 10 - Education for Sustainability

Spotlight Session 2 - Shaping Cloud 10 Education for Sustainability

**Keywords:** mission, vision, activities and cooperation

**Interest Group:** Cloud 10 (Education for Sustainability) and any interested parties

**Chairperson/ discussant:** Stella van der Wal-Maris

**Content:** This spotlight session, 'Shaping Cloud 10 Education for Sustainability', provides members and potential members of Cloud 10 (Education for Sustainability) with an opportunity to discuss and plan for the mission, vision and ongoing activities of the community of practice. Through a series of participatory activities, the session will support participants to discuss, think through and make decisions about how to become a dynamic community focused on the (research on) sustainability and 'Education for Sustainability'.

### Shaping Cloud 10 - Education for Sustainability

**Presenting Author:**Stella van der Wal-Maris, Marnix Academie, University of Applied Sciences, Netherlands

Spotlight Session 2 - Shaping Cloud 10 Education for Sustainability

**Keywords:** mission, vision, activities and cooperation

**Interest Group:** Cloud 10 (Education for Sustainability) and any interested parties

**Chairperson/ discussant:** Stella van der Wal-Maris

**Content:** This spotlight session, 'Shaping Cloud 10 Education for Sustainability', provides members and potential members of Cloud 10 (Education for Sustainability) with an opportunity to discuss and plan for the mission, vision and ongoing activities of the community of practice. Through a series of participatory activities, the session will support participants to discuss, think through and make decisions about how to become a dynamic community focused on the (research on) sustainability and 'Education for Sustainability'.

## Sessions G 4

24 November 2022 15:15 - 16:45

GWW1 - (0).10

Workshop

Lifelong learning

### Learning by doing. HAN STERKplaats, a training program to professionalize experiential knowledge

**Keywords:** Creativity, Diversity, Equality / Education for All, Inclusivity

**Interest group:** CLOUD 08 - Diversity & equality in different contexts

Since 2020, HAN University of Applied Sciences has had an LFB STERKplaats. This is an innovative training program for people with intellectual disability (ID) to actively discover and learn to use their talents and life experiences in HAN student programs and inclusive research projects. As students and coaches of the STERKplaats, we aim to contribute from what we learn to an equal, fully accessible society in which everyone's voice is heard, understood, and valued. In our workshop we invite participants to experience with us -the STERKstudents- what learning and working together can mean, how different knowledge backgrounds can contribute to the education of all, and which opportunities and challenges may be faced during the mutual exchange of knowledge. We like to

share who we are and how we work through active doing. To experience the collaboration opportunities and challenges, we offer inclusive, responsive, art-based activities. Then we will reflect together on what the possibilities and challenges can mean for your working environment, and what we can learn from your perspective.

#### **Learning by doing. HAN STERKplaats, a training program to professionalize experiential knowledge**

**Presenting Author:**Anja Zimmermann, HAN University Nijmegen, Netherlands

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#### **Sessions G 5**

24 November 2022 15:15 - 16:45

GWW1 - (0).15

Workshop

Higher education

#### **Activate to let participate and co-create**

**Keywords:** Creativity, Higher education, Practice-based research (methodology), Professional Development

**Interest group:** CLOUD 11 - Practice-based Research Methodology

In our workshop we shortly present results and experiences from our research on characteristics of appropriately guiding students and good interprofessional collaboration at senior secondary vocational education at basic level (EQF-1; mbo-1). We followed a design-based methodological approach in four phases: diagnose, design, test and evaluate, and implementation. The research goal was to deliver an evidence- and practice-based helping hand in order to improve guidance and interprofessional working. The first aim of this workshop is to have the participants experience and reflect on the methods we applied to co-creatively develop, choose and design possible products that meet requirements from the diagnose phase. Design-based, participatory, and co-creative research is a useful instrument for collaborative interaction between learning professionals. In addition, this methodology is emerging in professional higher education as it is acknowledged as an appropriate way of conducting research in professional contexts. The second aim of the workshop is to collaboratively and interactively address how participants can teach their students to conduct design-based, participatory, and co-creative research. Participants will experience the applied method of the *decision matrix*, followed by reflecting on this experience. The second part of the workshop consists of developing ideas to apply in class rooms via *brainwriting*.

#### **Activate to let participate and co-create**

**Presenting Author:**Rineke Keijzer-Groot, Rotterdam University of Applied Science, Netherlands; **Co-Author:**Vera Paul, Hogeschool Rotterdam, Netherlands; **Co-Author:**Diana van Dijk, Rotterdam University of Applied Science, Netherlands; **Co-Author:**Sandra Lohman, Rotterdam University of Applied Science, Netherlands; **Co-Author:**Paul van der Aa, Rotterdam University of Applied Science, Netherlands

In our workshop we shortly present results and experiences from our research on characteristics of appropriately guiding students and good interprofessional collaboration at senior secondary vocational education at basic level (EQF-1; mbo-1). We followed a design-based methodological approach in four phases: diagnose, design, test and evaluate, and implementation. The research goal was to deliver an evidence- and practice-based helping hand in order to improve guidance and interprofessional working. The first aim of this workshop is to have the participants experience and reflect on the methods we applied to co-creatively develop, choose and design possible products that meet requirements from the diagnose phase. Design-based, participatory, and co-creative research is a useful instrument for collaborative interaction between learning professionals. In addition, this methodology is emerging in professional higher education as it is acknowledged as an appropriate way of conducting research in professional contexts. The second aim of the workshop is to collaboratively and interactively address how participants can teach their students to conduct design-based, participatory, and co-creative research. Participants will experience the applied method of the *decision matrix*, followed by reflecting on this experience. The second part of the workshop consists of developing ideas to apply in class rooms via *brainwriting*.

#### **Sessions G 6**

24 November 2022 15:15 - 16:45

GWW1 - (1).11

Workshop

Higher education

#### **Inquiry based working as integral part of the teacher education programme**

**Keywords:** Curricula, Initial Teacher Education (Pre-service), Practice-based research (methodology), Research-based learning

**Interest group:** CLOUD 01 - Teacher education

This workshop focusses on a changing view concerning the contribution of pre-service teacher research and the way inquiry-based working can be integrated into teacher education. Internationally the consciousness grows that practitioner research is an important and effective professional learning strategy for teachers. In line with this, pre-service teacher research has been implemented in the bachelor teacher education programmes in the Netherlands 15 years ago. Teacher education institutes do not intend to develop researchers though, but curious and critical teachers who are able to improve their own practice and adapt to changing contexts. The aim of this workshop is to share and discuss methods which focus on the development of inquiry based working competences of pre-service teachers rather than research skills. The most meaningful way to develop these competences, is to start small from the own practice of the pre-service teachers, focus on improvement and make them wonder about what they know and don't know. Typical cases of issues that pre-service teachers encounter will also form the starting point of this workshop. A set of cards, designed to support the development of inquiry-based working competences, will help to start a professional dialogue about this development.

#### **Inquiry based working as integral part of the teacher education programme**

**Presenting Author:**Jeroen Rozendaal, University of Applied Science Rotterdam Hogeschool Rotterdam, Netherlands; **Presenting Author:**Lisette Munneke, Utrecht University of Applied Sciences, Netherlands; **Presenting Author:**Lidewij Katwijk, NHL-Stenden / University of Groningen, Netherlands

This workshop focusses on a changing view concerning the contribution of pre-service teacher research and the way inquiry-based working can be integrated into teacher education. Internationally the consciousness grows that practitioner research is an important and effective professional learning strategy for teachers. In line with this, pre-service teacher research has been implemented in the bachelor teacher education programmes in the Netherlands 15 years ago. Teacher education institutes do not intend to develop researchers though, but curious and critical teachers who are able to improve their own practice and adapt to changing contexts. The aim of this workshop is to share and discuss methods which focus on the development of inquiry based working competences of pre-service teachers rather than research skills. The most meaningful way to develop these competences, is to start small from the own practice of the pre-service teachers, focus on improvement and make them wonder about what they know and don't know. Typical cases of issues that pre-service teachers encounter will

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### Sessions G 7

24 November 2022 15:15 - 16:45

GWW1 - (1).09

Workshop

Lifelong learning

#### **IQ110 – a very unfair game about inequality of opportunity. Serious gaming as CPD**

**Keywords:** Continuing professional development in Teachers, Diversity, Game-based learning / Gamification, Inclusivity

**Interest group:** CLOUD 08 - Diversity & equality in different contexts

Promoting inclusive school cultures and addressing inequality of opportunity is high on the education agenda. Equipping teachers for them to identify and address this theme requires personal experiences and deep reflection. Recognizing this complexity, five Master's students chose this challenge for their collective graduate research project. Following the principles of design research, they developed a game that helps both beginning and experienced teachers reflect on the hidden mechanisms of inequality, particularly on the effects of socio-economic status (SES), and it stimulates them to address these mechanisms. In this workshop/ game, that is played in groups of 3-5 participants, each player first draws a persona card: each player 'becomes' a pupil with a given SES-background. Then the players, in turn, draw situation cards. These situations have three possible outcomes, each resulting in getting green (positive) or red (negative) chips. For each situation the other players discuss the most likely scenario and thus determine the pupil's score. The game ends with a discussion and an individual reflection on insights and intentions. The impact of the game – both in terms of outcomes and its driving mechanisms – was researched and the results are presented after the game. Then the implications (and applications) are discussed.

#### **IQ110 – a very unfair game about inequality of opportunity. Serious gaming as CPD**

**Presenting Author:**Dymphna Snijders Blok, HvA, Netherlands

Promoting inclusive school cultures and addressing inequality of opportunity is high on the education agenda. Equipping teachers for them to identify and address this theme requires personal experiences and deep reflection. Recognizing this complexity, five Master's students chose this challenge for their collective graduate research project. Following the principles of design research, they developed a game that helps both beginning and experienced teachers reflect on the hidden mechanisms of inequality, particularly on the effects of socio-economic status (SES), and it stimulates them to address these mechanisms. In this workshop/ game, that is played in groups of 3-5 participants, each player first draws a persona card: each player 'becomes' a pupil with a given SES-background. Then the players, in turn, draw situation cards. These situations have three possible outcomes, each resulting in getting green (positive) or red (negative) chips. For each situation the other players discuss the most likely scenario and thus determine the pupil's score. The game ends with a discussion and an individual reflection on insights and intentions. The impact of the game – both in terms of outcomes and its driving mechanisms – was researched and the results are presented after the game. Then the implications (and applications) are discussed.

### Sessions G 8

24 November 2022 15:15 - 16:45

GWW1 - (1).20

Workshop

Higher education

#### **How inclusive is your online or hybrid lesson? Guidelines to create inclusive distance education**

**Keywords:** Distance Education, Equality / Education for All, Higher education, Innovations in education

**Interest group:** CLOUD 08 - Diversity & equality in different contexts

Since the COVID-19 pandemic, online and hybrid education has grown exponentially and many of us have come to experience its benefits. However, in our study, we found that people with visual impairments experience difficulties in attending online and hybrid meetings, since keeping up with social interactions and information transfer can be quite challenging on these platforms. In this workshop we create awareness through simulation. In addition, we provide a set of guidelines that can be applied directly in online and hybrid education to improve participation of visually impaired students. The objectives of this workshop are 1. to understand what it is like to attend an online or hybrid classroom with a visual impairment, 2. to obtain guidelines to improve the inclusion of visually impaired students or teachers, and 3. to experience how these guidelines affect the quality of education in general. So, we aim for improving inclusion in online and hybrid education by simulating the attendance of an online or hybrid classroom with diverse types of visual impairments. Next, we offer a set of guidelines to improve online and hybrid learning. Finally, in a simple role-play, participants can experience how these guidelines enhance remote teaching on inclusion.

#### **How inclusive is your online or hybrid lesson? Guidelines to create inclusive distance education**

**Presenting Author:**Mijke Hartendorp, Saxion University of Applied Sciences, Netherlands; **Co-Author:**Job van 't Veer, NHL Stenden University of Applied Sciences, Netherlands; **Co-Author:**Alie Weerman, Windesheim University of Applied Sciences, Netherlands; **Co-Author:**Louis Pool, Royal Dutch Visio, Netherlands; **Co-Author:**Trudy van de Merbel, Bartimeus, Netherlands; **Co-Author:**Mirjam Boers, Oogvereniging, Netherlands

Since the COVID-19 pandemic, online and hybrid education has grown exponentially and many of us have come to experience its benefits. However, in our study, we found that people with visual impairments experience difficulties in attending online and hybrid meetings, since keeping up with social interactions and information transfer can be quite challenging on these platforms. In this workshop we create awareness through simulation. In addition, we provide a set of guidelines that can be applied directly in online and hybrid education to improve participation of visually impaired students. The objectives of this workshop are 1. to understand what it is like to attend an online or hybrid classroom with a visual impairment, 2. to obtain guidelines to improve the inclusion of visually impaired students or teachers, and 3. to experience how these guidelines affect the quality of education in general. So, we aim for improving inclusion in online and hybrid education by simulating the attendance of an online or hybrid classroom with diverse types of visual impairments. Next, we offer a set of guidelines to improve online and hybrid learning. Finally, in a simple role-play, participants can experience how these guidelines enhance remote teaching on inclusion.

### Sessions G 9

24 November 2022 15:15 - 16:45

GWW1 - (-1).14

Present & Discuss

Lifelong learning, Secondary education, Vocational education

#### **Practitioner Research in Different Contexts**

**Keywords:** At-risk students, Cognitive Skills & Development, Diversity, Educational Attainment & Achievement, Higher education, Instructional Design and Instructional Strategies, Medical & health education, Problem-based learning, Training and Development, Vocational education

**Interest group:** CLOUD 05 - HRD & Workplace learning, CLOUD 08 - Diversity & equality in different contexts

**Chairperson:** BOBBY HOFFMAN, University of Central Florida, United States

#### **Improving the transition from intermediate to higher vocational education**

**Keywords:** At-risk students, Educational Attainment & Achievement, Higher education, Vocational education

**Presenting Author:**Marloes Lange, HAN University of Applied Sciences, Netherlands; **Presenting Author:**martijn peters, HAN, Netherlands; **Presenting Author:**Bianca Leest, KBA Nijmegen, Netherlands; **Co-Author:**Marjolein Bomhof, Oberon Onderzoek en Advies, Netherlands

Around 40 percent of the students who have completed intermediate vocational education (mbo) go on to pursue their educational careers in higher vocational education (hbo). Unfortunately, these students are not always prepared and many drop out in their first study year. Teachers from the HAN university of applied sciences and four regional institutions for intermediate vocational education (ROC's) have formed three mixed teacher design teams that have developed and implemented activities to improve the transition from intermediate to higher vocational education. Researchers from HAN, KBA Nijmegen and Oberon have monitored the implementation. They have designed a questionnaire that measures study skills required of students to be successful in higher vocational education, such as 'working together' and 'planning and organising'. Together with data from the HAN about the first year study success of students, it is possible to provide insights into the progression of study skills during the transition from intermediate to higher vocational education, and if there are any correlations with study success and taking part in career orientation activities. Other educational institutions can use the results of this research to design effective activities to prevent students from dropping out.

#### **Constructing a framework for patient safety education in a European border region.**

**Keywords:** Instructional Design and Instructional Strategies, Medical & health education, Problem-based learning, Training and Development

**Presenting Author:**Juliët Beuken, Maastricht University, School of Health Professions Education, Netherlands; **Co-Author:**Jolanda van Golde, Maastricht University, FHML, Dept. of Educational Research and Development, Netherlands; **Co-Author:**Daniëlle Verstegen, Maastricht University, FHML, Dept. of Educational Research and Development, Netherlands

Patient safety is an important yet complex topic in healthcare. Patient safety education requires attention to both international standards and local needs. In a European project, we aim to design patient safety education for healthcare professionals in a European border region. Our research question was: "How can patient safety education in a European border region be designed in a coherent and contextual way, with attention to both international standards and local needs?" We conducted needs analyses in three countries in the border region to gain insight into local needs for patient safety education. While international guidelines are a good starting point, local needs differ, which results in different training modules. Using similar educational design principles in these different training modules can support coherence within and between modules. Thus, we developed a framework in which the 'what' (patient safety topics), 'who' (target groups) and 'how' (design principles) for each training module could be worked out in a similar structure. The framework enables stakeholders in patient safety education to learn from each other's' training modules, provides an overview of existing (and missing) patient safety education, and facilitates adaptations to different contexts in case one training module is implemented in different settings.

#### **Learning Skills Support for Children from Poor Families: "How to Listen to a Class" as An Example**

**Keywords:** At-risk students, Cognitive Skills & Development, Diversity, Instructional Design and Instructional Strategies

**Presenting Author:**Yuri Uesaka, The University of Tokyo, Japan; **Co-Author:**Ayumi Nishikawa, The University of Tokyo, Japan; **Co-Author:**Haruka Uetake, The University of Tokyo, Japan; **Co-Author:**Mengsi Liu, The University of Tokyo, Japan; **Co-Author:**Mari Fukuda, Simon Fraser University, Canada; **Co-Author:**Satomi Shiba, The University of Tokyo, Japan

Support for low-income families has become an essential issue in society. Children from low-income families tend to have relatively low academic achievement, which hinders their subsequent achievement in society at large. Most studies on low-income families have examined the background factors of negative influences but little research has been carried out on providing learning support. Supporting children's learning skills development by utilizing psychological findings can help children from low-income families to gain self-confidence and operate more successfully in society. Therefore, in this study, we developed and implemented courses that cultivate learning skills in a non-profit organization that supports children from families that receive welfare support. This manuscript introduces one of the courses focusing on "how to listen to a class" as an example and examines evidence about how well the developed course works among low-income family students. Twenty-five junior high school students participated and submitted a reflection sheet. The responses to the reflection sheets were analyzed. The results indicate that many students understood the learning strategy taught in the course. This practice involves university and organization staff working together to develop courses: hence, it can be considered as a good example of a "researcher-practitioner partnerships (RPPs)" (Coburn et al.).

#### **Sessions G 10**

24 November 2022 15:15 - 16:45

GW11 - (0).11

Case study

Higher education, Workplace learning

#### **Educators' professional development**

**Keywords:** Continuing professional development in Teachers, Higher education, Innovations in education, Professional Development, Professionalisation of educators

**Interest group:** CLOUD 02 - Educators' professional development

**Chairperson:** Barbara Roosken, Fontys University of Applied Sciences, Netherlands

#### **Agency of educational professionals: A case study**

**Keywords:** Continuing professional development in Teachers, Innovations in education, Professional Development, Professionalisation of educators

**Presenting Author:**Helma Oolbekkink, HAN University of Applied Sciences, Netherlands

The Dutch educational network 'Sprong Voorwaarts' aims to contribute to knowledge utilization related to future-oriented education. Within this network 'Knowledge labs' (KL) are established in which educational professionals collaborate to develop knowledge products for daily practice. In this case study, one of these KLs which aimed to contribute to agency of educational professionals in the context of innovation is presented. In the KL 9 participants contributed and two facilitators directed the process of design thinking and network learning. The knowledge lab developed a game for educational professionals which aims to encourage agentic actions and reflection. Factors which made the project successful related to the method used to develop the knowledge product and factors that made the project challenging were related to time and space for the participants. The conclusion drawn from this project is that collaborative work of professionals from different organizations can create a relevant knowledge product in a short period of time. The game that was developed received enthusiastic comments from the network partners. During this session participants will both experience the method of the knowledge lab and the game developed within this Lab.

#### **Inter-institutional Professional Development for Academic Teachers in CHARM European University**

**Keywords:** Continuing professional development in Teachers, Higher education, Innovations in education, Professionalisation of educators

**Presenting Author:**Sanne van Vugt, Utrecht University, Netherlands; **Co-Author:**Silvia Gallagher, Trinity College, The University of Dublin, Ireland; **Co-Author:**Annet van der Riet, Utrecht University, Netherlands

The European Universities initiative aims at achieving structural and systemic collaboration between universities, leading to inter-university campuses (European Commission, 2022a). The European Commission hopes to trigger a deep level of transnational institutional cooperation between higher education institutions, leading to transformation of involved institutions (European Commission, 2022b). CHARM European University is one of the 41 alliances that is co-designing a new university model through transnational collaboration across five partner universities in Barcelona, Dublin, Utrecht, Montpellier, and Budapest. The first milestone in the project was the development of the joint Master's programme "Global Challenges for Sustainability". The quality of CHARM-EU teaching and learning practices in the Master's relies heavily on the knowledge and skills of academic teachers. However, teachers new to the CHARM-EU project must upskill and incorporate diverse CHARM-EU educational principles into their teaching (e.g. challenge-based learning, sustainability, transdisciplinarity). Educational professionals have developed a Professional Development Programme for teachers in CHARM-EU, responsible for the design

and delivery of the Master's. Different professional development strategies were used to stimulate continuous learning. This case study provides a useful six-phased framework with practical recommendations for institutions seeking to develop inter-institutional professional development programmes, and understand the complexities involved in successful collaboration.

#### Sessions G 11

24 November 2022 15:15 - 16:45

GWW1 - (1).18

Case study

Higher education

#### Teacher Education

**Keywords:** Distance Education, Educational Technology, Higher education, Initial Teacher Education (Pre-service), Innovations in education, Internships

**Interest group:** CLOUD 01 - Teacher education

**Chairperson:** Janine Haenen, The Hague University of Applied Sciences, Netherlands

#### Internships in Times of Crisis: Collaborative production of instructional videos at a distance

**Keywords:** Distance Education, Higher education, Initial Teacher Education (Pre-service), Internships

**Presenting Author:** Robert Reuter, University of Luxembourg, Luxembourg; **Co-Author:** Gilbert Busana, Université du Luxembourg, Luxembourg; **Co-Author:** Alain Reeff, University of Luxembourg, Luxembourg

The Bachelor in Educational Sciences (BScE) at the University of Luxembourg offers a thorough and demanding teacher training program that combines academic and practical knowledge. As in many other initial teacher training programs, internships are a key part of each semester in the BScE. In the face of the COVID-19 health crisis, this essential part of our teacher training program could not be maintained. Indeed, the schools were closed, and the pupils were taught at a distance by their teachers. We therefore had to quickly innovate and set up alternative learning activities that best met the objectives of the internships. We thus asked our students to design and produce educational videos, in dyads, for the country's schools. The aim was to enable our students to develop the necessary skills to produce such learning resources and to make them available to schools via the Internet. We will describe, analyse and evaluate the scheme and the videos that were produced. We will also discuss possible lessons learned that might lead to adaptations in our training program.

#### Video-supported Initial Teacher Education: increasing efficiency & effectiveness

**Keywords:** Educational Technology, Initial Teacher Education (Pre-service), Innovations in education, Internships

**Presenting Author:** Vesna Belogaska, IRIS Connect, United Kingdom

In Initial Teacher Education, exposure to practical classroom teaching through school internships is a very important element of the training programme. It provides the student teachers with a valuable learning experience, allowing them to understand the reality of classrooms, make the connection between the theory and the real teaching practice, and develop competence and confidence on the journey to their professionalisation.

Supporting the student teachers through observation of their teaching, providing feedback, modelling and guided reflection on it is a crucial element in that process.

However, the traditional in-person observation presents challenges, particularly in terms of time and distance.

The increasing use of video technology in education has afforded the benefits of video-based observations of teaching practice, which have been identified in a large body of research conducted over the last few decades, concluding that, in the right conditions, "video technology can make the classroom observation process more valid and reliable, easier to implement and less costly" (Kane et al., 2015).

This case study presents the example of the Rotterdam University of Applied Sciences who have been using the video-based teacher training platform IRIS Connect for several years, resulting in increased efficiency and effectiveness of the initial teacher training.

#### Awarding Ceremony & Keynote Speeches 1

25 November 2022 08:45 - 10:00

K33 - A0.05

EAPRIL Keynote

Vocational education

#### Illustrative pictures on exploiting visual displays to enhance tech-supported vocational learning

**Keywords:** Educational Technology, In-service Teacher Training, Instructional Design and Instructional Strategies, Vocational education

**Interest group:** CLOUD 06 - Learning in Digital Era: Technology Enhanced Learning

**Chairperson:** Nick Gee, Birmingham City University, United Kingdom

This contribution is based on seven brushstrokes which briefly depict research cases on technology integration in vocational education. All cases exploit the use of visual displays, ranging from traditional means such as photographs and videos to more advanced technologies such as hypervideo and virtual-reality. After an illustrative description of the practices we have supported, some cross-cutting themes will be highlighted, such as the role technology can play to support vocational education and the importance of having a strong pedagogy on which to ground technology integration. We will emphasize the latter by proposing a pedagogical model of experiential learning that we have developed over the years and by focusing our attention on the concepts of experience - given that it includes physical and virtual, authentic and simulated, reference and mistaken experiences - and of collaboration. Collaboration will be considered: at the level of instructional design, as an instructional strategy to achieve learning outcomes (including the cognitive, metacognitive, and affective dimensions of learning); at the level of the VET system, to foster connectivity among key players and across learning sites; at the community level, where a design-based research approach can be powerful in supporting collaboration among educators, researchers, practitioners, and other stakeholders.

#### Illustrative pictures on exploiting visual displays to enhance tech-supported vocational learning

**Presenting Author:** Alberto Cattaneo, Swiss Federal University for Vocational Education and Training, Switzerland

This contribution is based on seven brushstrokes which briefly depict research cases on technology integration in vocational education. All cases exploit the use of visual displays, ranging from traditional means such as photographs and videos to more advanced technologies such as hypervideo and virtual-reality. After an illustrative description of the practices we have supported, some cross-cutting themes will be highlighted, such as the role technology can play to support vocational education and the importance of having a strong pedagogy on which to ground technology integration. We will emphasize the latter by proposing a pedagogical model of experiential learning that we have developed over the years and by focusing our attention on the concepts of experience - given that it includes physical and virtual, authentic and simulated, reference and mistaken experiences - and of collaboration. Collaboration will be considered: at the level of instructional design, as an instructional strategy to achieve learning outcomes (including the cognitive, metacognitive, and affective dimensions of learning); at the level of the VET system, to foster connectivity among key players and across learning sites; at the community level, where a design-based research approach can be powerful in supporting collaboration among educators, researchers, practitioners, and other stakeholders.

#### Awarding Ceremony & Keynote Speeches 2

25 November 2022 08:45 - 10:00

LvS10 - F0.70

EAPRIL Keynote

**“Hybridization in ‘reverse’ classroom, the best way to stimulate co-elaborative work!”**

**Keywords:** Collaborative Learning, Innovations in education, Teaching approaches, Well-being and engagement

**Interest group:**

**Chairperson:** Zarina M. Charlesworth, Switzerland

Hybridization in pedagogy is not limited to teaching with the same methodology both online and in the classroom. Moreover, innovation in pedagogy is not reduced to an alternative way versus academic teaching. The COVID-19 pandemic has significantly affected education in terms of teaching and learning. Due to this crisis, academic institutions have had to navigate through different learning environments in order to continue educating their students. So, hybridization is a combination of in-class and online learning. It's a way to dissolve these dichotomies. This conference draws upon a method of hybrid learning, the reverse classroom, a “do it yourself” approach close to flipped classroom which encompasses student-centered instructional approaches, collaborative group work and assessment in evaluation and skill development. This innovative pedagogy based in the north of France (Lille) focuses on an instructional approach that uses hybridization to engage students. Through observations and student feedback before and after the pandemic, students have expressed their interest as well as discontent using this method. Strengths include an appreciation of the interaction and exchanges with the teacher and their peers, whereas weaknesses comprise of dissatisfaction regarding the composition of group members and the vast amount of work required.

**“Hybridization in ‘reverse’ classroom, the best way to stimulate co-elaborative work!”**

**Presenting Author:** Jean-Charles CAILLIEZ, Université Catholique de Lille, France

Hybridization in pedagogy is not limited to teaching with the same methodology both online and in the classroom. Moreover, innovation in pedagogy is not reduced to an alternative way versus academic teaching. The COVID-19 pandemic has significantly affected education in terms of teaching and learning. Due to this crisis, academic institutions have had to navigate through different learning environments in order to continue educating their students. So, hybridization is a combination of in-class and online learning. It's a way to dissolve these dichotomies. This conference draws upon a method of hybrid learning, the reverse classroom, a “do it yourself” approach close to flipped classroom which encompasses student-centered instructional approaches, collaborative group work and assessment in evaluation and skill development. This innovative pedagogy based in the north of France (Lille) focuses on an instructional approach that uses hybridization to engage students. Through observations and student feedback before and after the pandemic, students have expressed their interest as well as discontent using this method. Strengths include an appreciation of the interaction and exchanges with the teacher and their peers, whereas weaknesses comprise of dissatisfaction regarding the composition of group members and the vast amount of work required.

**Sessions H 1**

25 November 2022 10:45 - 12:15

GW1 - (0).09

EAPRIL Cloud Spotlight Session

**CLOUD 11 - Inquiring reflection on dilemmas in practice based research (spotlight with all Clouds)**

**Keywords:** Continuing professional development in Teachers, Inquiry learning, Practice-based research (methodology), Workplace learning

**Interest group:** CLOUD 11 - Practice-based Research Methodology

As cloudcoördinators we are working on an open access scientific publication on 'rigor, relevance and ethics: solving dilemma's in the methodology of practice-based research'. Data for this publication are the results of the first Cloud spotlight in Portoroz, together with transcriptions of the recordings of the spotlight session 2019 on rigor, relevance and ethics, and transcriptions of the expert-appraisal with experienced practice-based researchers in September 2020. The insights gained will be presented and used in the proposed spotlight session during the EAPRIL Conference 2022. We would like all the other EAPRIL cloud coordinators to participate, and of course all other curious and inquiring participants in the conference. In the spotlight session we will present our insights in a nutshell, including the approach we developed to reflect on professional dilemmas PBR researchers experience. Next, we will practice this approach in subgroups with an (invited) case-contributor and a moderator. Participants experience the value of the approach and see how they can possibly use it themselves.

**CLOUD 11 - Inquiring reflection on dilemmas in practice based research (spotlight with all Clouds)**

**Presenting Author:** Niek van den Berg, Aeres University of Applied Sciences Wageningen, Netherlands; **Presenting Author:** Marco Mazereeuw, NHL Stenden University of Applied Sciences, Netherlands; **Presenting Author:** Lisette Munneke, Utrecht University of Applied Sciences, Netherlands

As cloudcoördinators we are working on an open access scientific publication on 'rigor, relevance and ethics: solving dilemma's in the methodology of practice-based research'. Data for this publication are the results of the first Cloud spotlight in Portoroz, together with transcriptions of the recordings of the spotlight session 2019 on rigor, relevance and ethics, and transcriptions of the expert-appraisal with experienced practice-based researchers in September 2020. The insights gained will be presented and used in the proposed spotlight session during the EAPRIL Conference 2022. We would like all the other EAPRIL cloud coordinators to participate, and of course all other curious and inquiring participants in the conference. In the spotlight session we will present our insights in a nutshell, including the approach we developed to reflect on professional dilemmas PBR researchers experience. Next, we will practice this approach in subgroups with an (invited) case-contributor and a moderator. Participants experience the value of the approach and see how they can possibly use it themselves.

**Sessions H 2**

25 November 2022 10:45 - 12:15

GW1 - (1).11

Present & Discuss

Higher education, Secondary education

**Teacher Thinking in Different Contexts**

**Keywords:** 21st century learning, Assessment and evaluation, Beliefs and conceptions of teaching, Creativity, Culture and Education, Higher education, Professional identity, Teacher thinking, Writing

**Interest group:** CLOUD 01 - Teacher education, CLOUD 10 - Assessment & Evaluation

**Chairperson:** Eila Burns, Finland

**Justifications for Addressing Unplanned Controversial Issues in the Classroom**

**Keywords:** 21st century learning, Beliefs and conceptions of teaching, Professional identity, Teacher thinking

**Presenting Author:** Charlot Cassar, Radboud University, Malta; **Co-Author:** Paulien Meijer, Radboud University, Netherlands; **Co-Author:** Ida Oosterheert, Radboud University, Netherlands

Controversial issues often arise unexpectedly in the classroom context. Some teachers actively choose to address such issues rather than avoid them. This study explores the justifications that such teachers provide for addressing unplanned controversial issues in their classroom. The study draws on data from semi-structured interviews with teachers from different school contexts in Europe. The data suggests that the justifications need to be understood within a temporal framework characterised by the immediacy of the situation, encompassing the teachers' past experiences and a desired future, unfolding in a specific context in which emotions play a significant role. The justifications are at the same time intricately linked to teachers' personal and professional beliefs and what they perceive to be their job as teachers. The justifications highlight participants' moral convictions so that their decision to address an unplanned controversial

issue in the classroom may be understood as a morally motivated response to what they perceive to be unjust – teachers feel they need to act. The justifications are anchored to some fundamental questions related to the purpose of education and who the person in teaching is.

#### **Validation of a Questionnaire to Assess EFL Teachers' Perceptions and Practices of Written Feedback**

**Keywords:** Assessment and evaluation, Higher education, Teacher thinking, Writing

**Presenting Author:** Abderrahim Mamad, University of Szeged, Doctoral School of Education, Hungary; **Co-Author:** Tibor Vigh, University of Szeged, Hungary

This study aimed to verify the validity and reliability of a questionnaire designed to compare EFL writing teachers' perceptions and self-reported practices towards product- and process-oriented written feedback in higher education. The research questions were: To what extent is the questionnaire valid and reliable? What are the relationships between its subscales? In the study, a self-developed questionnaire was used to collect data from 51 Moroccan public university EFL writing teachers. The data and sampling of the two scales of product- and process-based written feedback were suitable for factor analysis,  $.72 \leq KMO \leq .82$ . The reliability values demonstrated that all the 9 subscales were acceptably high,  $.50 \leq Cronbach's \alpha \leq .89$ , and did not need the modification of items. By comparing each subscale in the perceptions' dimension with its counterpart in the self-reported practices' dimension, the correlation coefficients were significant,  $.64 \leq r \leq .80, p < .001$ . This study could not only fill the gap created by the rarity of research comparing teachers' perceptions and practices but also reveal the extent to which teachers' perceptions of written feedback match their self-reported practices, mainly in the assessment and evaluation of students' writing.

#### **Public art pedagogy in expanding learning environments**

**Keywords:** 21st century learning, Creativity, Culture and Education, Teacher thinking

**Presenting Author:** Oona Myllyntaus, University of Helsinki, Finland

This presentation focuses on public art, including the art on display in formal learning environments as part of teaching. It examines the views of visual arts teachers on public art in educational facilities and the use of it in teaching primary, secondary, and tertiary education in Finland in the 2010s. In the teachers' questionnaire completed in 2017–2018, the visual arts teachers ( $n=45$ ) defined public art as a cultural resource, although they also perceived it as an independent and useful teaching tool and learning material. Works of art by professional artists, as well as student artworks, were regarded as public art as they are on display within the semi-public space of educational facilities. Works of art in public urban spaces as well as in the art exhibitions, city art museums, and galleries fell within the scope of public art pedagogy. Visual arts teachers particularly promoted argumentation skills and the emotional expression of learners, as well as 21st century skills, of which creativity and innovation, cultural awareness, and social responsibility were the most often mentioned.

#### **Sessions H 3**

25 November 2022 10:45 - 12:15

GWW1 - (0).15

Present & Discuss

Higher education, Secondary education

#### **Collaborative Learning & Competence-Based Education**

**Keywords:** 21st century learning, Collaborative Learning, Competence-based education, Creativity, Educational Effectiveness and quality of education, Higher education, Innovations in education, Knowledge Building and Development, STEM

**Interest group:** CLOUD 03 - Strategies to improve teaching and learning environments, CLOUD 04 - Improving learning and well-being, CLOUD 06 - Learning in Digital Era: Technology Enhanced Learning

**Chairperson:** Lidewij Katwijk, Netherlands

#### **The validation of a co-creation questionnaire in higher education**

**Keywords:** Collaborative Learning, Creativity, Higher education, Innovations in education

**Presenting Author:** Miranda de Hei, The Hague University of Applied Sciences, Netherlands; **Presenting Author:** Inge Audenaerde, The Hague University of Applied Sciences, Netherlands

We developed a co-creation questionnaire regarding the quality of the co-creation process in higher education. We describe co-creation in higher education as a collaborative process where students, lecturers and parties from outside the university work, such as work field professionals, together develop innovative products, processes or knowledge. The aim of the validation of the questionnaire is to create a tool that can be used to assess co-creation in higher education in order to support the process by indicating which aspects of this co-creation process can be further improved. The items of the questionnaire are based on a literature study. Hundred-and-three respondents (students, lecturers and professionals) filled in the questionnaire. We performed a principal component analyses in order to evaluate and determine the scales of the questionnaire. A reliability analysis indicated these scales to be sufficiently reliable. We finalized the tool for use in higher education and are working on a set of 70 activities, ten per scale to help co-creating groups in higher education to improve the aspects that the tool indicates as useful to optimise.

#### **Framing the effects of HIPs from a High Impact Learning perspective. A review of studies.**

**Keywords:** Collaborative Learning, Educational Effectiveness and quality of education, Higher education, Innovations in education

**Presenting Author:** Simla Arikan Acikgoz, High Impact Learning Academy, Belgium; **Co-Author:** Mien Segers, Maastricht University, Netherlands

Due to developments in information and communications technology, increasing knowledge production in the economy, globalisation and changes in professional structures and expectations, the call for reshaping education to increase its impact in terms of value for societal demands, has become acute. For this reason, it is of great importance that higher education institutions and colleges offer an education program providing their students with the basic skills and competencies that they can meet the needs of the globalizing world and adapt to the fast and constantly developing world. The main research question addressed in this review study is: Which HILL building blocks explain the effects of high-impact practices in the learning environment? 56 studies were included in the research and a narrative analysis was performed. It was concluded that almost all of the effects of HIPs were supported and strengthened by the HILL building blocks of the HILL model such as, enhancing teamwork skills, communication skills, student-faculty-peer interaction; building a sense of personal and social responsibility, openness to diversity; promoting academic success, motivation and retention; enabling students to work effectively with others and learning from each other. Also, HILL building blocks make HIPs more viable while making their effects more permanent.

#### **Digitality and STEM in education: A qualitative pedagogical competence framework**

**Keywords:** 21st century learning, Competence-based education, Knowledge Building and Development, STEM

**Presenting Author:** Alexander Koch, University of Teacher Education Fribourg, Switzerland; **Co-Author:** Anja Küttel, University of Teacher Education Fribourg, Switzerland

Many technological devices that are used in school rely on digital technologies that are used for information searches or to change the modality of learning. Teachers develop competences to pedagogically implement these devices. In any respect, the devices themselves are hardly understood neither by the students nor by the teachers. STEM education hardly addresses this deficit, engineering and technology mainly deal with the re-assembly of objects, the sciences with the explanation of phenomena, and mathematics and ICT with rules and algorithms. It seems that digitality has not been identified as a separable area of content knowledge within the universe of STEM subjects, yet. In this paper we perceive digitality as a transversal and unique entity of STEM that encapsulates its own content knowledge. In a conceptual understanding of digitality from a usage perspective, a nature of digitalization perspective, and a human-social perspective, we also provide a suggestion of how to integrate these perspectives into an educational curriculum based on a qualitative pedagogical competence framework. Our suggestion sees the opportunity to leverage digital STEM education beyond a sheer level of usage and allows all disciplines to approach digitality from different perspectives.



## Sessions H 4

25 November 2022 10:45 - 12:15

GWW1 - (0).37

Present & Discuss

Higher education, Vocational education

### Innovations in Education in Different Contexts

**Keywords:** Beliefs and conceptions of learning, Educational Technology, Higher education, Innovations in education, Instructional Design and Instructional Strategies, Motivation, Professional Development, Vocational education

**Interest group:** CLOUD 03 - Strategies to improve teaching and learning environments, CLOUD 06 - Learning in Digital Era: Technology Enhanced Learning

**Chairperson:** Sarah Haas, Denmark

### Dissemination of nationally developed products in local educational institutions: Lessons learned

**Keywords:** Educational Technology, Higher education, Innovations in education, Professional Development

**Presenting Author:** Dorien Hopster, University of Twente, Netherlands; **Co-Author:** Myrthe Lubbers, University of Twente, SURF, Netherlands

Many educational innovations involving technology are initiated in higher education. Dissemination of these initiatives is necessary because this allows others to use the innovations, leading to sustainable implementation. However, it is a very complex process that cannot be taken for granted. Therefore, we conducted a study on the dissemination of three innovative products of the *Acceleration plan for educational innovation with ICT* (Dutch: Versnellingsplan) in 16 higher education institutions in the Netherlands. We focus on two questions: 1) In which phase are the higher education institutions concerning the dissemination of the three innovative products, and 2) what are factors that promote or hinder the dissemination? The results from 39 semi-structured interviews showed that the educational institutions are into different dissemination phases. This can be explained by various promoting and hindering factors, like the compatibility of the innovative product, the attitude of stakeholders towards ICT innovations, and contextual factors, such as the support of the board. During the presentation, these factors are discussed in more detail in relation to the dissemination phase in which each educational institution is located. Educational practice can take these factors into account when designing future innovative projects.

### Learning affordances of Extended Reality technologies in Vocational Education and Training

**Keywords:** Educational Technology, Innovations in education, Instructional Design and Instructional Strategies, Vocational education

**Presenting Author:** Francesca Amenduni, Swiss Federal University for Vocational Education and Training (SFUVET), Switzerland; **Co-Author:** Vito Candido, Swiss Federal University for Vocational Education and Training (SFUVET), Switzerland; **Co-Author:** Chiara Antonietti, Swiss Federal University for Vocational Education and Training (SFUVET), Switzerland; **Co-Author:** Martina Rausedo, Swiss Federal University for Vocational Education and Training (SFUVET), Switzerland; **Co-Author:** Rita Cosoli, Swiss Federal University for Vocational Education and Training (SFUVET), Switzerland; **Co-Author:** Alberto Cattaneo, Swiss Federal University for Vocational Education and Training, Switzerland

The present contribution is aimed at investigating the learning affordances provided by three Extended Reality (XR) Technologies, and namely Augmented Reality (AR), Virtual Reality (VR) and 360-degree video (360V) in Vocational Education and Training (VET) according to the perspective of VET teachers and VET teacher educators (N = 24, F = 11). Data were collected by exposing the participants to a few examples of these technologies through the method of workstation atelier. After completing the experience with each technology, participants were required to fill in a questionnaire with an open-ended question aimed at collecting their instructional ideas on the integration of the specific XR technology in VET. The most reported learning affordances in the open ended answers concern *learning flow and procedures, reflection and analysis, simulation, sense of immersion, and design and manipulate virtual objects*. *Learning flow and procedures* was reported much more for AR than for VR and 360V. *Reflection and analysis* and *sense of immersion* were reported much more for 360V than for VR and AR. *Simulation* and *design and manipulating virtual objects* were reported much more for VR than for AR and 360V. Explanations of these differences are briefly discussed in the contribution.

### How can we develop an open learning environment that challenges and motivates (honours) students?

**Keywords:** Beliefs and conceptions of learning, Higher education, Innovations in education, Motivation

**Presenting Author:** Janine Haenen, The Hague University of Applied Sciences, Netherlands; **Co-Author:** Sylvia Vink, ICLON-Leiden University Graduate School of Teaching, Netherlands; **Co-Author:** Ellen Sjoer, The Hague University of Applied Sciences, Netherlands; **Co-Author:** Wilfried Admiraal, Oslo Metropolitan University, Norway

The aim of this study was to investigate how students perceived an open learning environment in higher education. We considered the learning environment as open, because it encouraged students self-directed learning and co-creation with the teachers. The context was an honours programme in which students and teachers worked together on complex and open-ended issues related to the work field. To learn how students' perceived this open learning environment, we studied the balance between the perceived challenge and ability level, and how this impacted on students' motivation. We studied this programme from 2016 till 2019 by using a storyline research method. The quantitative data were analysed with descriptive statistics and the qualitative data were categorized on a grounded way. We can conclude that, although the students perceived the challenge level lower than their ability level, students' motivation in 2016-2017 and 2018-2019 was good. In 2017-2018, students felt able in performing the activities and less challenged, which impacted their motivation negatively. In addition, in all three years, students mentioned the assignments and activities as factors that impacted their perceived challenge. Based on these results we can discuss how open learning environments can be (re)developed in order to challenge and motivate (honours) students.

## Sessions H 5

25 November 2022 10:45 - 12:15

GWW1 - (0).16

Present & Discuss

Higher education, Workplace learning

### Educators' professional development in Different Contexts

**Keywords:** 21st century learning, Continuing professional development in Teachers, Early childhood education, Learning and neuroscience, Organisational learning, Professional Development, Professional identity, Workplace learning

**Interest group:** CLOUD 02 - Educators' professional development

**Chairperson:** Robert Reuter, University of Luxembourg, Luxembourg

### What Supports the Building of Teachers' Capacity to Master Education for Sustainable Development?

**Keywords:** 21st century learning, Early childhood education, Professional Development, Workplace learning

**Presenting Author:** Torhild Høydalsvik, Volda University College, Norway; **Co-Author:** Jan Håkon Vikane, Volda University College, Norway

This study asks **'How can teachers in early childhood education build a stronger capacity to master education for sustainable development?'** The participants were part-time students who were also practising as teachers. We chose a mixed-methods design with the following datasets: 1) teacher discussions and written understandings of the concept of sustainability, 2) their choices of tasks for children, and 3) a small-scale survey. Our results show the capacity to educate for sustainable development should be strengthened by developing teachers' expertise, motivation, and opportunities. Their pedagogical praxis reflects weakness in education for sustainable development when they experience less autonomy or attachment.

**Changing shape: Research-Practice Collaborations build teacher efficacy and shape identity**

**Keywords:** Continuing professional development in Teachers, Learning and neuroscience, Professional Development, Professional identity

**Presenting Author:**Stephanie MacMahon, The University of Queensland, Australia

Evidence-informed practices can enhance learning, and research from fields such as the science of learning are making important contributions to this evidence base. However, mobilising this research into educational practice is challenging, and teacher efficacy in engaging with research in their daily work is reported to be low. The Partner Schools Program is a collaborative approach that brings researchers, knowledge brokers and educators together to design and conduct an inquiry on a school-identified problem of practice. Through interaction, the partners learn with and from one another, and educators are supported to build capability and efficacy in research, the science of learning, and how to apply this into practice. This presentation will share findings of a mixed methods study of 40 educators from across 20 schools involved in the Program, investigating how collaborative research-practice partnerships influence teacher self- and collective-efficacy and the continuous learning of educators. Preliminary findings suggest that the approach is successful in building teacher self- and collective-efficacy, enabling professional learning to be sustained and scaled beyond the life of the partnership, with educators moving beyond the traditional boundaries of the 'users' of research to also be the 'producers' and 'mediators' of research in practice.

#### **Change and continuity of teacher agency - A longitudinal study in the case of Hong Kong**

**Keywords:** Organisational learning, Professional Development, Professional identity, Workplace learning

**Presenting Author:**Josephine Lau, University of Jyväskylä, Finland

Teacher professional agency is critical in actualizing reforms, innovations, and changes in schools. It is important to address how teacher agency is resourced and constrained in the situated context along the career trajectory. The subject-centred socio-cultural approach indicates agency is related to the dimensions of how one influences their own work, develops work practices and negotiates their professional identities. This presentation is a longitudinal study posing a central research question on how teacher agency is changed and continued in the context over 2 years of time. The study utilises a qualitatively driven mixed-method research approach. Both qualitative and quantitative data are collected in 2018 and 2020 from 13 in-service teachers in Hong Kong. The results indicate three main changes in teacher agency, namely, 1) growing, 2) diverted, and 3) languishing agency. The continuation agency is found in certain areas, for example, active agency in professional learning and restricted agency in school management. The study signifies that the global pandemic and contextual specific factors such as Hong Kong political changes affect teachers' agency enactment. For the theoretical implication, mixed-method approach helps capture the different facets of the development in professional agency.

#### **Sessions H 6**

25 November 2022 10:45 - 12:15

GWW1 - (1).20

Present & Discuss

Higher education

#### **Peer interaction/learning in Higher Education**

**Keywords:** Higher education, Interaction and discourse in education, Language Education, Medical & health education, Mentoring, Peer Interaction / learning, Professional identity, Self-regulation and self-regulated learning

**Interest group:** CLOUD 03 - Strategies to improve teaching and learning environments

**Chairperson:** Katharina Prummer, Germany

#### **Integrating Peer feedback to enhance academic performance and interaction. An exploratory study**

**Keywords:** Higher education, Interaction and discourse in education, Peer Interaction / learning, Self-regulation and self-regulated learning

**Presenting Author:**Maartje Henderikx, Open University of the Netherlands, Netherlands; **Co-Author:**Emmy Vrieling-Teunter, Open University of the Netherlands, Netherlands

Peer feedback is considered reliable and beneficial to support learning and interaction. However, it is a complex metacognitive skill that can be modelled upon four regulatory skill levels. Due to its positive contributions, peer feedback was integrated in an academic writing course and evaluated by asking students what gains they experienced by the peer feedback exercise. Due to its complexity, students were also asked what they additionally needed to better shape their peer feedback. In total 99 students answered these reflective questions which were analyzed using coding software. In reaction to the first research question our analyses showed, in line with theory, that students generally perceived PFB positively, look more critically at their work, and gained a better understanding of the intent of the assignment. In response to the second research question we especially saw the need for modelling in the phase of emulation on *critical reflection* and *interaction*. We also distinguished a need for a safe learning environment, a PFB buddy system, and content discussion. In follow-up research, it would be interesting to study whether the above course modifications result in a better construction of modelling.

#### **Playing the patient role in a consultation, gain a different perspective on academic L2 acquisition**

**Keywords:** Higher education, Language Education, Medical & health education, Peer Interaction / learning

**Presenting Author:**Hao Yu, Maastricht University, FHML, Dept. of Educational Research and Development, Netherlands; **Co-Author:**Maryam Asoodar, Maastricht University, FHML, Dept. of Educational Research and Development, Netherlands; **Co-Author:**Jeroen Van Merriënboer, Maastricht University, Netherlands

ObjectivesInspired by Krashen's input hypothesis, we are interested in investigating the role of intrinsic motivation in influencing students' academic second-language (L2) acquisition by having the students play the role of the patient in doctor-patient consultation role-plays.MethodsThe study was a mixed-method pre-, post-study. Fifteen third year bachelor students from the medical-Dutch course were invited to take part in the study. Students completed the pre- and post-basic psychological need satisfaction scale (BPNSS), and academic motivation scale (AMS) and joined individual semi-structured interviews. Results were analyzed through t-test and thematic analysis.ResultsWe found significant improvement in basic psychological need satisfaction by comparing the pre- and post-BPNSS. There was also a significant improvement in *intrinsic motivation to experience stimulation* between the pre- and post-test. The following four themes were identified from the interview results: intentional input, comprehension, production, and atmosphere. Discussion Our study results suggest that playing the patient role in consultation role-plays has great practical significance. Our interview themes are consistent with Krashen's input hypothesis and show that students' patient experience in role-playing contributes to their L2 acquisition in medical consultations. In the future, course designers should explore the implementation of different roles in role plays to facilitate students' academic L2 acquisition.

#### **Learning together about you and the other - stimulating personal development in higher education**

**Keywords:** Higher education, Mentoring, Peer Interaction / learning, Professional identity

**Presenting Author:**Kariene Mittendorff, Saxion University of Applied Sciences, Netherlands; **Co-Author:**Jolise 't Mannetje, Saxion University of Applied Sciences, Netherlands; **Co-Author:**Sophie Verdegaa, Saxion University of Applied Sciences, Netherlands

In recent years, we see that higher education institutes are using new forms of teaching to achieve more student-oriented education. The rationale behind these developments is to stimulate students to develop their own personal and professional profile, and to become self-directed and self-aware professionals. This research analyses how learning environments should be organised to facilitate this development and how teachers can guide these processes. Aiming to stimulate students' personal development, three pilots were implemented and evaluated during a two-year project. In these pilots students learn in small groups (so called home groups) where they are stimulated through different learning activities to learn from and with each other: i.e. to learn about themselves and about the other students in the group. Through observations, interviews and questionnaires, data are collected on the design, goals and effects of these pilots. Based on this data, working principles per pilot and overarching principles for the design of education to facilitate the personal development and professional identity of students were formulated. At the conference, the results of the study will be presented.

#### **Sessions H 7**

25 November 2022 10:45 - 12:15

GW1 - (0).08

Present & Discuss

Higher education

### Initial Teacher Education

**Keywords:** Higher education, Initial Teacher Education (Pre-service), Language Education, Organisational learning, Professional Development, Professionalisation of educators, Reading, Writing

**Interest group:** CLOUD 01 - Teacher education, CLOUD 02 - Educators' professional development

**Chairperson:** Morteza Karami, Iran

### Reading motivation and reading habits in preservice teachers

**Keywords:** Higher education, Initial Teacher Education (Pre-service), Language Education, Reading

**Presenting Author:** Anneke Smits, Windesheim University, Netherlands; **Co-Author:** Daniëlle van den Brink, Windesheim University of Applied Sciences, Netherlands

This practitioner research provides insight in reading motivation and reading habits of preservice teachers. The three central research questions were: What reading motivation and reading habits do pre-service teachers show? What factors can be identified that are related to reading motivation and reading habits? What can bring about/inhibit change in their reading habits? In order to answer the research questions a survey was constructed on the basis of existing validated instruments. Quantitative and qualitative analysis of the results took place. Significant positive relations with reading motivation and habits were found for the constructs: transportation and reading self-efficacy whereas significant negative relations were found for the preference for digital media. Several factors were identified that may bring about or inhibit growth in reading habits. For many pre-service teachers growth in reading habits is necessary. Reading motivation alone does not seem enough to bring about a stable reading habit. Important opportunities for positive change are compelling books, and insight in the importance and effects of reading for language and/or general development. Also, discussion of the effects of time spent in the digital world seems warranted.

### Expanding the boundaries of learning within an educational partnership

**Keywords:** Higher education, Initial Teacher Education (Pre-service), Organisational learning, Professionalisation of educators

**Presenting Author:** Carolien Duijzer, Marnix Academie (PABO), Netherlands; **Co-Author:** Marjolijn Peltenburg, Marnix Academie, Netherlands

This study addresses how institute-based teacher educators and primary school-based teacher educators partaking in a professionalization trajectory aimed at learning-in-connection expanded their brokering activities at the intersection of the teacher education institute and primary school via lesson study, and the type of learning they experience. This professionalization trajectory is known as VONC ('Verbinden', 'Opleiden', 'Netwerken' and 'Creëren', or: Connecting, Educating, Networking and Creating). Consistent with boundary crossing theory we operationalize learning into four learning mechanisms (*identification, coordination, reflection, and transformation*). Data analyses was based on the dialogues during three meetings of the professionalization trajectory and in-depth interviews with five institute-based teacher educators and five school-based teacher educators, partaking in the professionalization trajectory at the beginning and at the end of the schoolyear, as well as in-depth interviews with five of their students. Results show that the learning mechanisms of identification and coordination are present within the learning of participants, and to a lesser extent processes of reflection and transformation. It appears that Lesson study can be relevant in achieving learning-in-connection between the teacher education institute and the schools.

### Evaluation of an intervention to promote PCK-W of prospective teachers

**Keywords:** Higher education, Initial Teacher Education (Pre-service), Professional Development, Writing

**Presenting Author:** Valentin Unger, St.Gallen University of Teacher Education, Switzerland; **Co-Author:** Cornelia Glaser, University of Education Heidelberg, Germany; **Co-Author:** Tobias Dörfler, University of Education Heidelberg, Germany; **Co-Author:** Jan Hochweber, St. Gallen University of Teacher Education, Switzerland

Writing is an important skill in society and yet numerous students struggle with it. Teachers, especially language teachers, play an important role in promoting writing skills. To fulfill this role adequately, they need professional pedagogical content knowledge about the didactics of writing (PCK-W). Empirical preliminary work shows us that there is still need for development of PCK-W of prospective teachers. In addition, there is only limited evidence on how to effectively promote PCK-W and which factors influence the development of PCK-W. In this study, a theory-based intervention was developed and implemented in close consultation with didactics experts. An evaluation implemented in university courses using a pre-post control group design showed a moderate intervention main effect. Prior PCK-W was shown to be a significant predictor of PCK-W development, while other theoretically relevant factors (e.g., general cognitive abilities, interests, self concept) were not related to change in PCK-W. The results can be used to improve teacher education and in-service training by transferring intervention elements into applied settings and making them available to target audiences. In addition, the results provide indications for the improvement of research related to practice.

### Sessions H 8

25 November 2022 10:45 - 12:15

GW1 - (1).10

Present & Discuss

Higher education, Lifelong learning, Workplace learning

### 21st century & Lifelong Learning

**Keywords:** 21st century learning, Deep-level and profound learning, Higher education, Lifelong Learning, Morality & religious education, Philosophy of education, Workplace learning, Writing

**Interest group:** CLOUD 05 - HRD & Workplace learning

**Chairperson:** Michiel Veldhuis, Hogeschool IPABO Amsterdam/Alkmaar, Netherlands

### From formal education in Iran to lifelong learning: discovering human agency in religious education

**Keywords:** 21st century learning, Lifelong Learning, Morality & religious education, Philosophy of education

**Presenting Author:** Samaneh Khalili, Helsinki University, Finland

Abstract Considering the importance of human agency in lifelong learning and societal life, this paper investigates human agency in religious education (RE) in Iran with the Shia Islamic state. This aim will be accomplished by interviews RE teachers in Iran. Methodologically, deductive content analysis will be conducted. The paper will employ the analytical framework of the human agency (Author) and democratic concept of lifelong learning. The analysis explores how teachers perceive lifelong learning in their practical situations and whether teachers' perspectives align with the values outlined in the national curricula. The results show that while in the national curriculum of Iran, moral and individual values in religious education are strongly concerned, according to the teachers, there are some distances between ideal values in formal education and what is actually happening. In Iranian curriculum, although the focus is on wisdom and responsibility, there are still many debates related to critical thinking, freedom, human rights and lifelong learning. The value of this study is to provide more understanding of human agency in religious education within a specific Islamic social context and presenting some recommendations to improve lifelong learning in RE in Iran. **Keywords:** Human agency, lifelong learning, RE, Iran.

### Perspectives on Parkinson's care innovation

**Keywords:** 21st century learning, Deep-level and profound learning, Lifelong Learning, Workplace learning

**Presenting Author:** Thieme Stap, Radboudumc Health Academy, Netherlands; **Co-Author:** Jur Kokksma, Radboudumc Health Academy, Netherlands

Increasingly, successful healthcare innovation is understood to rely on learning processes of all those involved. Quality depends on persons in healthcare practice and the environment they enact together. Nevertheless, how people learn in innovation, and how these learning processes contribute, is still understudied. The convictional dimensions of such a mindset change, imply a crucial role for transformative learning. From this position we studied healthcare innovation, based on the following research question: What kind of transformative learning processes, if any, did people go through, when they were involved in a highly innovative healthcare context, and has person-centred care as the core of its mission and vision?

We conducted a retrospective, multi-level stakeholder analysis, and semi-systematic observations at the workplace (2017-2021). We studied the background of Parkinson's care innovation (2004-2021), and conducted 22 in-depth interviews. Grounded analysis constructed six themes: 1. Reflections about learning and education; 2. Reflections about change and innovation; 3. Convictions about care; 4. Vision; 5. Practice and community; 6. Personal leadership. We observe a central paradox, which pivots around perspective transformation: to be able to gain a broader perspective, one needs to be in the appropriate environment. But to become that appropriate environment, that broader perspective is necessary.

#### **Revision characteristics and improvement of text quality in university essay writing**

**Keywords:** 21st century learning, Higher education, Lifelong Learning, Writing

**Presenting Author:** Martine Hasselman, Saxion - University of Applied Sciences, Netherlands; **Co-Author:** Olga Firsova, Open University of the Netherlands, Netherlands; **Co-Author:** Kim Dirckx, Zuyd University of Applied Sciences, Netherlands

Revision characteristics and text quality: an in-depth study of text revisions in the context of university essay writing The presented study focused on the characteristics of text revisions performed by university students while improving the first drafts of their writings and on the relation between these improvements and the quality of produced texts. An explorative study was conducted among 28 first-year Dutch students in the writing education of a Psychology Bachelor to answer the research question: "What are the characteristics of text revisions that students carry out in the process of essay writing and what is the impact of revisions on the quality of produced texts?" After students submitted essay drafts, self-assessments with a rubric prompted the students to carry out revisions and submitted results. All revisions were analysed qualitatively by systematic text analysis (Geisler, 2004). In addition, the effect of the revisions on text quality, and the impact of self-reflective prompts on revisions and text quality was investigated. The study outcomes contribute to in-depth insights in what students actually do and to what effect when they revise their writings and thus contribute to better understanding of student writing. *Academic writing skills, revision, characteristics, higher education, self-assessment.*

#### **Sessions H 9**

25 November 2022 10:45 - 12:15

GWW1 - (0).10

Present & Discuss

Higher education

#### **Collaborative Learning**

**Keywords:** Collaborative Learning, Cooperative learning, Higher education, Innovations in education, Knowledge Building and Development, Problem Solving, Professional Development, Vocational education, Workplace learning

**Interest group:** CLOUD 03 - Strategies to improve teaching and learning environments, CLOUD 12 - Leadership in Education

**Chairperson:** Sanne van Vugt, Utrecht University, Netherlands

#### **Bridging 'Communities of Practice' Theory and Practice with Theory-derived Design Propositions**

**Keywords:** Collaborative Learning, Knowledge Building and Development, Professional Development, Workplace learning

**Presenting Author:** Ellen Rusman, Faculty of Educational Sciences - Open University of the Netherlands, Netherlands; **Co-Author:** Lilian Woudstra, Nijmegen School of Management, Institute for Management Research, Netherlands; **Co-Author:** Jeroen De Jong, Nijmegen School of Management, Institute for Management Research, Netherlands; **Co-Author:** Wouter Van Zwol, Nijmegen School of Management, Institute for Management Research, Netherlands; **Co-Author:** Beatrice Van der Heijden, Nijmegen School of Management, Institute for Management Research, Netherlands

Communities of Practice (CoPs) are seen as a driving force in innovation and continuous learning, which has attracted much attention from both scholars and practitioners. However, the limited practical operationalization of the concept severely limits the capacity to study CoP theory or apply it in practice. The present study aims to derive a more rigorous and detailed operationalization of CoP theory. In order to do so, we conducted a literature study of Wenger's work and important literature on which this work was based. The literature was subsequently analyzed using a context-intervention-mechanism-outcome (CIMO) logic, enabling us to not only specify important factors in the development of CoPs, but also the generative mechanisms involved in the fostering of its development. With these more detailed design propositions, we simultaneously help to contribute to answering the repeated call for more empirical (rather than descriptive) research into CoP development and to overcoming challenges in CoP development in practice.

#### **Design framework for boundary crossing learning communities in the installation sector**

**Keywords:** Collaborative Learning, Innovations in education, Knowledge Building and Development, Problem Solving

**Presenting Author:** Maaïke Konings, De Haagse Hogeschool, Netherlands; **Co-Author:** Ellen Sjoer, The Hague University of Applied Sciences, Netherlands

The installation sector needs well-qualified people and organizations that can jointly solve wicked problems in the energy transition. This is only possible if they innovate together across the boundaries of their own professional or educational practice. However, existing learning communities often lack the focus and capability of transforming practices. The purpose of this study is a dynamic design framework for boundary crossing learning communities in the installation sector, so that these can flexibly achieve their intended innovative learning outcomes. The research question is: Which mechanisms stimulate a dynamic boundary crossing learning community in the energy transition that achieves the intended innovative outcomes in a given context? This question is answered through literature review and semi-structured interviews. The results are structured by the mechanisms using the designable elements: epistemic, spatial and instrumental, social. Results show that creating a good balance between autonomy and structure in boundary crossing learning communities is important to achieve innovation, whereby these learning communities should as far as possible be in line with how people learn in social networks.

#### **Preparing for interprofessional collaboration in interprofessional learning teams**

**Keywords:** Collaborative Learning, Cooperative learning, Higher education, Vocational education

**Presenting Author:** Trynke Keuning, Hogeschool KPZ, Netherlands

Professionals working in the domain of children and education, such as teachers, childcare, youth care and social work professionals, are increasingly expected to collaborate in order to ensure optimal development opportunities for all children. To prepare future professionals for interprofessional collaboration for optimal child development, interprofessional competences should be developed during pre-service training. In the current study we report the implementation of and first experiences with an innovative way to introduce students to interprofessional collaboration: participation in interprofessional learning teams. Data was gathered by means of online questionnaires administered among students and supervisors and two focus group sessions. This explorative research shows that participating in interprofessional learning teams can contribute to enhance interprofessional competences of students. By jointly taking on challenges and solving those together, students from various educational programs learned to combine perspectives and utilize each other's professional knowledge. Coordination between study programs and between learning teams and practice appear to be essential for successful implementation of interprofessional collaboration as part of a shared curriculum between programs that prepare students for professions in the domain of children and education.

#### **Sessions H 10**

25 November 2022 10:45 - 12:15

GWW1 - (0).11

Case study

Higher education, Lifelong learning

### **Strategies to improve teaching and learning environments**

**Keywords:** Innovations in education, Lifelong Learning, Organisational learning, Project-based learning, Self-efficacy, Self-regulation and self-regulated learning, Workplace learning

**Interest group:** CLOUD 03 - Strategies to improve teaching and learning environments

**Chairperson:** Marijn Neuman-Sjonger, Netherlands

### **Right on Track. Valuing knowledge and work experience of professionals that start higher education**

**Keywords:** Lifelong Learning, Self-efficacy, Self-regulation and self-regulated learning, Workplace learning

**Presenting Author:** Hennie van Veen, HAN University of Applied Sciences, Netherlands; **Co-Author:** Janneke Boon, HAN University of Applied Sciences (UAS), Netherlands

Professionals with long-term work experience often hesitate to start higher education (EQF-level 5/6). One of the reasons they mention is the feeling their existing competences are underestimated by formal educational institutions. On the other hand, this group of learning professionals mostly attended more traditional education long ago, and often lack a feeling of self-efficacy, which is a proven factor of influence in succeeding education (Dinter, Dochy & Segers, 2011). By taking their present (informal, tacit or practice-developed) knowledge and skills as a starting point, we developed the program 'Right on Track' to help learning professionals substantiate their existing competences. We support the students to 'unravel' their existing knowledge and skills and give meaning to it in order to proof what parts of the curriculum of the Social Work course they already master. To reach this goal, we are working with the concept of *growth mindset* (Dweck, 2009) as underlying principle to enhance feelings of self-efficacy and self-confidence in regard to their learning possibilities. In this workshop we will actively let participants experience an unraveling process, by letting them work on 'what is already inside their heads and hands' and how this can be turned into valuable proof of competence.

### **Challenges in creating a higher education transdisciplinary workspace**

**Keywords:** Innovations in education, Organisational learning, Project-based learning, Workplace learning

**Presenting Author:** Timo Derriks, HZ University of Applied Sciences, Netherlands

At this moment, we are in the process of designing, implementing and evaluating a transdisciplinary workplace in higher education. Students from a variety of programs and years work together to further societal, organizational, business and research challenges. The HZ University of Applied Sciences seems to be of a perfect size to carry out defined projects by connecting them with various programs and disciplines. The workplace is named 'The Garage'; a metaphor for projects (cars) rolling in, needing a certain fix (by using design thinking) and worked on by mechanics with different expertise (students). We have our own space, called the HZ Innovation Studio where students come to work. There are sufficient office desks and we mimic the vibe of mixing a start-up with a creative hub. Students work on different projects, in different groups. They also have different criteria to meet in terms of completing their ECs. Some students are in for a minor, some for personality credits, some for an apprenticeship whereas others are graduating with us. Results so far are promising as we move to become a renowned platform for transdisciplinary learning. We see the opportunities but face several challenges in this that we like to discuss.

### **Sessions H 11**

25 November 2022 10:45 - 12:15

GWW1 - (1).08

Workshop

Higher education

### **Enhancing agency of future professionals to improve students' well-being and performance**

**Keywords:** Higher education, Lifelong Learning, Professional Development, Well-being and engagement

**Interest group:**

The number of higher education students with mental health problems is increasing. This negatively impacts their study success and labour market opportunities. The COVID-19 pandemic has worsened this situation. Despite school services and a wide variety of interventions, it seems difficult to turn this tide. At the moment, the focus is on aftercare and cure and students are not actively involved in the analysis of the problem nor in the design of the solution. In our innovative project, we aimed to foster students' capability as active 'agents' in their own and their peers' well-being processes. We build on salutogenic theory (what makes us healthy vs what makes us ill) and take an asset-based approach aiming at students' agency. To engage students in dialogue and reflection we use two evidence-based participatory (action research) methods: Photovoice and the Structured-Interview-Matrix (SIM). These methods have been shown to be suitable for mapping student agency assets among higher education students. Furthermore, an instrument has been developed to measure this student agency. The purpose of this workshop is to introduce participants to the research purpose and measurement instrument and have them experience the SIM method and discuss its benefits.

### **Enhancing agency of future professionals to improve students' well-being and performance**

**Presenting Author:** Gwendolijn Boonekamp, HAN University of Applied Sciences, School of Sports & Exercise, Netherlands; **Presenting Author:** Velibor Peters, Hogeschool van Arnhem en Nijmegen/HAN University, Netherlands; **Co-Author:** Karin Orbon, HAN University of Applied Sciences (UAS), Netherlands; **Co-Author:** Jan Bouwens, HAN University of Applied Sciences (UAS), Netherlands

The number of higher education students with mental health problems is increasing. This negatively impacts their study success and labour market opportunities. The COVID-19 pandemic has worsened this situation. Despite school services and a wide variety of interventions, it seems difficult to turn this tide. At the moment, the focus is on aftercare and cure and students are not actively involved in the analysis of the problem nor in the design of the solution. In our innovative project, we aimed to foster students' capability as active 'agents' in their own and their peers' well-being processes. We build on salutogenic theory (what makes us healthy vs what makes us ill) and take an asset-based approach aiming at students' agency. To engage students in dialogue and reflection we use two evidence-based participatory (action research) methods: Photovoice and the Structured-Interview-Matrix (SIM). These methods have been shown to be suitable for mapping student agency assets among higher education students. Furthermore, an instrument has been developed to measure this student agency. The purpose of this workshop is to introduce participants to the research purpose and measurement instrument and have them experience the SIM method and discuss its benefits.

### **Sessions H 12**

25 November 2022 10:45 - 12:15

GWW1 - (-1).14

Workshop

Higher education

### **Improving the educational leadership practice through self-reflection**

**Keywords:** Higher education, Innovations in education, Leadership development, Leadership styles

**Interest group:** CLOUD 12 - Leadership in Education

Our workshop aims to help participants reflect on their educational leadership practices, by 1. filling in our 'educational leadership scan' via qualtrics and 2. sharing examples of best-practices in the group through an interactive exercise. In the workshop we will share our self-developed educational leadership scan with the participants and briefly explain its theoretical foundation, starting with the four educational leadership practices described by Leithwood et al. (e.g. Leithwood et al., 2020). These practices are: 1. Set directions, 2. Build Relationships and Develop People, 3. Develop the Organization to Support Desired Practice and 4. Improve the Instructional Program. Participants receive direct feedback based on the results of the scan, in the form of scores on the four practices. We then ask participants to first walk to the practice they scored highest on and then to the practice they score lowest on. The practices are marked on the floor of the room. Participants are invited to share their observation of the distribution of participants in the room and to share a concrete example of an effective action (either performed or observed) related to the practice they chose. Participation in the workshop results in new inspiration for effective leadership actions in practice.

#### **Improving the educational leadership practice through self-reflection**

**Presenting Author:**Janina den Hertog, Saxion University of Applied Sciences, Netherlands; **Co-Author:**Evelien van Wieringen, Saxion University of Applied Sciences, Netherlands; **Co-Author:**Miriam Cents-Boonstra, Saxion University of Applied Sciences, Netherlands; **Co-Author:**Karin Brouwer-Truijten, Saxion University of Applied Sciences, Netherlands

Our workshop aims to help participants reflect on their educational leadership practices, by 1. filling in our 'educational leadership scan' via qualtrics and 2. sharing examples of best-practices in the group through an interactive exercise. In the workshop we will share our self-developed educational leadership scan with the participants and briefly explain its theoretical foundation, starting with the four educational leadership practices described by Leithwood et al. (e.g. Leithwood et al., 2020). These practices are: 1. Set directions, 2. Build Relationships and Develop People, 3. Develop the Organization to Support Desired Practice and 4. Improve the Instructional Program. Participants receive direct feedback based on the results of the scan, in the form of scores on the four practices. We then ask participants to first walk to the practice they scored highest on and then to the practice they score lowest on. The practices are marked on the floor of the room. Participants are invited to share their observation of the distribution of participants in the room and to share a concrete example of an effective action (either performed or observed) related to the practice they chose. Participation in the workshop results in new inspiration for effective leadership actions in practice.

#### **Sessions I 1**

25 November 2022 13:15 - 14:45

GWW1 - (0).15

Case study

Higher education, Vocational education

#### **Educational Technology**

**Keywords:** Blended learning, Continuing professional development in Teachers, Distance Education, Educational Technology, Higher education, Leadership development, Workplace learning

**Interest group:** CLOUD 03 - Strategies to improve teaching and learning environments, CLOUD 06 - Learning in Digital Era: Technology Enhanced Learning

**Chairperson:** Samaneh Khalili, Helsinki University, Finland

#### **Four templates for blended Design Based Education**

**Keywords:** Blended learning, Educational Technology, Higher education, Workplace learning

**Presenting Author:**Francine Behnen, NHL Stenden, Academie Educatie vo & mbo, Netherlands; **Co-Author:**Elianne Feenstra, NHL Stenden, University of Applied Sciences, Netherlands; **Co-Author:**Margreeth Themmen, NHL Stenden, University of Applied Sciences, Netherlands

At NHL Stenden University of Applied Science, the key educational concept is Design-Based Education (DBE, <https://edu.nl/mwp8j>) (Geitz & de Geus, 2019). Important aspects of this innovative concept are to learn from practical experience, to learn from and with each other, and to pay attention to personal and professional development. During the Covid-19 lockdowns of schools, DBE took place online and was supported by a variety of Information and Communication Technologies (ICT), one of which was the Learning Management System (LMS). Unfortunately, maintenance for this LMS will cease in 2023 and a new LMS has been chosen. By default, however, this new LMS is well equipped to share subject matter content and information, the I of ICT. For blended forms of DBE though, technologies that facilitate communication with and amongst learners, the C of ICT, are equally, if not more, important. To bridge this poignant gap between the informative features the LMS provides and the communicative functions desired for DBE, we developed four templates, one of which is intended to support DBE. This DBE-template structures communication rather than subject matter content. As of April 2022, the four templates have become available. At the EAPRIL conference, we will share our first experiences.

#### **Modernising TVET pedagogy in Ethiopia: perspectives on management and leadership**

**Keywords:** Continuing professional development in Teachers, Distance Education, Educational Technology, Leadership development

**Presenting Author:**Ilona Laakkonen, JAMK University of Applied Sciences, Finland; **Presenting Author:**Graham Burns, JAMK University of Applied Sciences, Finland; **Co-Author:**Anne Harmoinen, Centria University of Applied Sciences, Finland; **Co-Author:**Matiyas Teshome, Ethiopian Technical University (ETU), Ethiopia

Vocational education is key in creating equality, well-being and growth. MOPEDE (Modernising TVET Pedagogy in Ethiopia) project supports educational development through the integration of state of the art pedagogical and digital solutions as part of curriculum, implementation, and methods in vocational education and teacher professional development. It involves development of leadership and change management in a joined partnership between Ethiopian and Finnish organisations. This paper presents findings from the steps taken to develop leadership and management at the ETU (Ethiopian Technical University). Data from the managers and leaders was collected using three methods: a survey with open questions, an employee interview by the managers, and a workshop with Finnish and Ethiopian partners, which evaluated the stage of e-learning development with Kotter's 8-step model of managing change. The results indicate the need for collegial support and sharing of expertise, experience and practice among the project partners and organisations. We suggest leadership actions and areas that are critical for capacity building and sustainable change in e-learning. In addition to project results, we also provide insights to creating relationships and trust and building joint understanding in a project team 10 000 kilometers apart, when pandemic has prevented all face to face meetings.

#### **Sessions I 2**

25 November 2022 13:15 - 14:45

GWW1 - (1).08

Case study

Higher education, Primary education

#### **Teachers' professional development in Different Contexts**

**Keywords:** Higher education, Knowledge Building and Development, Professional Development, Professionalisation of educators, Reading, School Development, Writing

**Interest group:** CLOUD 02 - Educators' professional development

**Chairperson:** Linda Sontag, NRO, Netherlands

#### **Users' conceptions of the open access journal in the sector of Finnish university of applied science**

**Keywords:** Higher education, Knowledge Building and Development, Professional Development, Writing

**Presenting Author:**Ilkka Väänänen, LAB University of Applied Sciences, Finland; **Co-Author:**Mervi Friman, Häme University of Applied Sciences, Finland; **Co-**

**Author:**Mauri Kantola, Turku University of Applied Sciences, Finland

The purpose of this case study was to find out the readers' opinions of the Finnish UAS Journal's quality. The research questions were formulated as follows: (1) what the readability and usability of the UASJournal from the reader's point of view are, and (2) what kind of development initiatives they express. The data was gathered by using a web-based questionnaire, and there were 100 respondents. In addition, with the qualitative data, the Net Promoter Score was used to rate the likelihood to recommend the journal to a colleague educator. In general, the journal was seen as a familiar suitable-for-all professional, non-scholar journal, suitable for the whole UAS "family". The respondents were very pleased, and every third would recommend it (NPS 14). The Finnish UAS Journal supports the dialogue between UASs and wider society and affects a high-impact 'hat trick' through cooperation, dialogue, and the articles published. This national professional open access semi-academic journal has a justified place to maintain and develop the professional expertise of the higher education learning and knowledge production ecosystem, and to improve educational practice.

#### **PRO-Reading: Effective reading education grounded in sustainable reading policy**

**Keywords:** Professional Development, Professionalisation of educators, Reading, School Development

**Presenting Author:**Iris Vansteelandt, AP University College/Ghent University, Belgium; **Co-Author:**Jona Hebbrecht, Odisee University College, Belgium

Reading is to be considered a core skill in education and society, as being a competent and motivated reader relates highly to academic and societal success (Sullivan & Brown, 2013). However, recent results based on both PIRLS and PISA assessments are in line with insights from earlier studies (e.g., Smith et al., 2012) and point to a declining international trend in primary and secondary students' affective aspects of reading. In the present case study's context of Flanders (Belgium) this decline can also be observed regarding students' reading comprehension (e.g., Mullis et al., 2017). Given this alarming (inter)national trend and in line with the existing consensus about the impact of teacher quality on students' achievement and motivation (Guerriero, 2017), teachers competent in teaching and promoting reading are more than ever needed. In this respect, this case study focuses on a two year professional development program called PRO-Reading where primary school teachers were effectively professionalized in order to improve their competences regarding reading education and, hence, these of their students (Desimone, 2009; Fauth et al., 2019). More particularly, we share how 24 schools improved their reading education practices starting from a strong school specific reading policy process and plan.

#### **Sessions I 3**

25 November 2022 13:15 - 14:45

GWW1 - (1).11

Case study

Higher education

#### **Leadership & Teacher Action in Higher Education**

**Keywords:** Curricula, Higher education, Initial Teacher Education (Pre-service), Inquiry learning, Leadership development, Professional identity, Teacher thinking

**Interest group:** CLOUD 01 - Teacher education, CLOUD 12 - Leadership in Education

**Chairperson:** Monique A.M. Ridder, Windesheim University of Applied Sciences, Netherlands

#### **Transformational leadership as corner stone of the master Circular Economy**

**Keywords:** Curricula, Higher education, Leadership development, Professional identity

**Presenting Author:**Franceina van Zalk, HAN University Nijmegen, Netherlands

In 2017 we started the development of the Master Circular Economy (HAN, the Netherlands) addressing the societal need for change agents equipped to deal with the wicked problems of today: climate change, energy deficiency, food insecurity, income disparity etc. Change agents that can guide the transition towards future proof business. We would like to present the way we designed the corner stone 'Transformational leadership' in the master programme Circular Economy.

Transformational leadership is a style of leadership with aims to achieve a higher level of employee engagement with organisational goals. In this master programme we aimed to educate professionals to individually be able to catalyse change and motivate others. Our experiences so far motivate us to share our insights: after finishing the programme students display an overwhelming growth in professional identity, collaboration potential, personal growth and capacity to create impact. This year we received a 'gold medal' by Weekblad Elsevier, for 'best choice' in the category 'masters'. With the participants we would like to discuss their experience with the development of change agents towards a sustainable world in higher education and their suggestions for research on active mechanisms in the educational programme as described.

#### **Focus on own teacher action instead of doing research**

**Keywords:** Higher education, Initial Teacher Education (Pre-service), Inquiry learning, Teacher thinking

**Presenting Author:**Marianne Reinders, Windesheim University of Applied Sciences, Netherlands; **Co-Author:**Anneke Smits, Windesheim University, Netherlands

Instead of the regular final research and report, the PABO (teacher training institute for primary education) of Windesheim University of Applied Sciences started an alternative project to foster students' inquiring attitude. This was prompted by our in-depth evaluation of the outcomes of the research projects in the final phase of the study programme and our accompanying recommendations. The aim of the alternative graduation project was to train students to become reflective professionals and to stimulate them to critically examine and optimize their own teaching practice on the basis of their inquiring attitude. Under the guidance of the graduation coordinator and with the support of a researcher, 16 teachers started supervising some 60 students. For 6 months students participated in one of the 7 (subject) thematic projects. During regular intervision moments and thematic subgroups, teachers reasoned about their own formative actions, the content of the final projects and the students' learning process. In June 2022, the project will be validated and evaluated. A preliminary conclusion is that teachers struggle to let go of beliefs and vocabulary around "doing research," but that the emphasis on content and understanding leads to engagement, enthusiasm, learning and inquiring attitude in the participating students.

#### **Sessions I 4**

25 November 2022 13:15 - 14:45

GWW1 - (1).09

Case study

Lifelong learning

#### **Professional Development & Lifelong Learning**

**Keywords:** Collaborative Learning, Corporate learning, Higher education, Lifelong Learning, Professional Development, Training and Development

**Interest group:** CLOUD 03 - Strategies to improve teaching and learning environments, CLOUD 05 - HRD & Workplace learning

**Chairperson:** Loes van Wessum, Windesheim Flevoland, Netherlands

#### **Implementing action-oriented and agile learning principles in organisational learning activities**

**Keywords:** Corporate learning, Lifelong Learning, Professional Development, Training and Development

**Presenting Author:**Derk-Jan Nijman, HAN University of Applied Sciences, Netherlands; **Co-Author:**Jörg Longmuß, Sustainum Institut, Germany

Principles of action-oriented and agile learning can support organisations in - quickly and effectively - developing practical learning activities themselves. In the Erasmus+ project HoWarp (DE/AT/NL) a format is being developed for organisations to design action-oriented and agile learning activities themselves, with a

specific focus on SME's. In the current and final phase of the project, case studies are being carried out in the three participating countries to test the implementation of the principles in practice. The case studies have yet to be completed, but in the EAPRIL-session we will describe the context and objectives of the case studies, and indicate which success factors and challenges for designing and implementing action-oriented and agile learning emerge from them. Moreover, results of evaluations among participants will be shared. Finally, using the principles and lessons learned in the case studies, we will discuss the possibilities of applying action-oriented and agile principles with participants in their organisations.

#### **Collaborating with interest groups and experts by experience in developing educational programs.**

**Keywords:** Collaborative Learning, Higher education, Lifelong Learning, Professional Development

**Presenting Author:**Judith Slabbers, Hogeschool Arnhem Nijmegen, Netherlands; **Co-Author:**Will van Sebille, Will van Sebille Holding, Netherlands

The need for keeping professionals up to speed with emerging questions in their field of expertise is rising. Collaboration between formal educational institutions and the organizations the professionals work in, is seen as one of a key factor for success in developing educational programs for working people. At HAN UAS, we recently gave another impulse to this development by not only collaborating with professional organizations, but also with experts by experience, and representatives of interest groups on the theme of birth mothers and adoptees. Together with educational developers, a post-bachelor program was built based on equality in collaboration and respect for the different perspectives and needs of the developers. This resulted in a course that is carried out in full collaboration between HAN, FIOM, two adoption coaches and a birth mother. The course is suitable for working professionals and students in the end phase of their bachelor study. The added worth of collaborating in the development period as well in carrying out the program with FIOM and the experts by experience is seen by students as learning from the inside perspective as well as learning professional competences. Bringing those two together helps to integrate new skills and knowledge.

#### **Sessions I 5**

25 November 2022 13:15 - 14:45

GWW1 - (0).37

Case study

Higher education, Workplace learning

#### **Collaborative Learning in Different Contexts**

**Keywords:** Collaborative Learning, Higher education, Innovations in education, Professional Development, Well-being and engagement, Workplace learning

**Interest group:** CLOUD 05 - HRD & Workplace learning

**Chairperson:** Tom De Schryver, Netherlands

#### **Feed-up! Maximising a sense of urgency for feedback literacy in teacher education**

**Keywords:** Collaborative Learning, Innovations in education, Professional Development, Workplace learning

**Presenting Author:**Nanke Dokter, Fontys University of Applied Sciences, Netherlands; **Co-Author:**Naomi Mertens, Fontys MLI, Netherlands; **Co-Author:**Kris Verbeek, Fontys University of Applied Science, Netherlands

Providing effective feedback plays a crucial role in the educational vision of Fontys School for Child studies and Education in the Netherlands. Feedback is important because it helps students to take control of their own learning. Research shows that students, at the start in higher education, have difficulty processing feedback because they lack skills and attitude that is also referred to as "feedback literacy" (Carless & Boud, 2018). To enhance student teacher feedback literacy a two year project was initiated, aiming for co-creation with educators, students and teachers on tools to enhance feedback literacy. The project started with a kick off in the form of an online symposium for educators, teachers and student, followed by a design based process in ten small learning communities (PLCs). The PLCs consisted of educators, students and sometimes teachers. After the first year we can conclude that the approach was successful for developing a sense of urgency and supporting co-creation in the PLCs, also that attention is needed for the role of knowledge brokers and knowledge sharing between teacher educator teams. In this case we share our rocky road to a successful implementation of feedback literacy, including bumpy moments, reflections and ideas to move forward.

#### **Transitioning into new Stages of Learning: Developing Competences and Identities for Success**

**Keywords:** Collaborative Learning, Higher education, Innovations in education, Well-being and engagement

**Presenting Author:**Jennifer Boyle, University of Glasgow, UK, United Kingdom; **Presenting Author:**Joanna Royle, University of Glasgow, United Kingdom;

**Presenting Author:**Andrew Struan, University of Glasgow, United Kingdom

The impact of Covid-19 on incoming students and researchers is plain: students and researchers were denied access to their usual educational experiences, to their usual networking and social interaction, and to their usual assessment types. This resulted in an incoming cohort of students and researchers with higher levels of anxiety and, often, less awareness of the requirements of higher education/research. Recognising the need to engage with new students and researchers in innovative ways, the Student Learning Development (SLD) team and the Researcher Development (RD) team undertook two institution-wide projects to provide students with a "world-changing" start to their studies. For undergraduates, a new course – T2G: Transition to Glasgow – was created by SLD. Designed around developing competences, instilling identity and easing the transition to formal education, the course provided students with the skills for success. For postgraduate researchers, a new course – PGR@Home – was created by RD. Designed around integration and developing competencies, the course offered asynchronous and synchronous opportunities for research students to begin the process of joining the University community in their new role. This joint case study will present and reflect on the ways in which we adopted a whole-institution response to transition to new stages of learning and research.

#### **Sessions I 6**

25 November 2022 13:15 - 14:45

GWW1 - (1).20

Case study

Higher education

#### **Collaborative Learning in Higher Education**

**Keywords:** 21st century learning, Collaborative Learning, Higher education, Peer Interaction / learning, Self-regulation and self-regulated learning, Social interaction

**Interest group:** CLOUD 03 - Strategies to improve teaching and learning environments, CLOUD 06 - Learning in Digital Era: Technology Enhanced Learning

**Chairperson:** Johan Smarius, Avans Hogeschool / Avans University of Applied Sciences, Netherlands

#### **Using the FROCOLE app for feedback and reflection in group learning**

**Keywords:** Collaborative Learning, Higher education, Self-regulation and self-regulated learning, Social interaction

**Presenting Author:**Karel Kreijns, Open University of the Netherlands, Netherlands; **Co-Author:**Maartje Henderikx, Open University of the Netherlands, Netherlands

Group learning is an active learning pedagogical technique where group members collectively work on a joint task to achieve certain learning outcomes that benefit all. Literature has shown better learning outcomes with group learning when contrasted with individual or competitive learning. However, these results can only be achieved when the group learning is structured in a way that facilitates productive social interaction which cannot be taken for granted. Productive social interaction not only means that the dialogues, argumentation and reasoning of the group members are epistemic and transactive but also that group members have to regulate their and each other's learning as well as the learning of the group as a whole. The FROCOLE app was specifically developed by the



Open Universiteit to structure these latter activities by means of feedback and reflection. In this case study session, we discuss the theoretical foundation of the FROCOLE app, its design and implementation, and how it was deployed in several pilots. We found that the FROCOLE app was easy to use and did support feedback and reflection among group members but only for those groups that saw the deeper meaning of the FROCOLE app right at the beginning.

#### **Stepwise approach towards institutionalizing service-learning**

**Keywords:** 21st century learning, Collaborative Learning, Higher education, Peer Interaction / learning

**Presenting Author:** Bram Pynoo, VIVES University of Applied Sciences, Belgium; **Co-Author:** Ele Holvoet, University College VIVES, Belgium

In our institution there has always been a focus on interdisciplinary learning and connecting with societal actors. Programs should be geared towards the increasingly complex requirements of society and the professional field. This means that not only subject-related professional competences are important to develop, but also competences such as problem-solving skills, social and personal skills (Crevits & Muyters, 2017). Service-learning is a pedagogy through which students can acquire these competences, as well as disciplinary skills and knowledge. High-quality service-learning demands a lot from programs, lecturers, students and societal partners. This is why a step-by-step construction was chosen. In a first concept note (VIVES, 2017b) the boundaries and conditions were set for intra- or extra-curricular validation of intra- or extra-curricular social engagement. Following this concept note actions were taken at different levels (program, study area, institution): formal validation of students' extra-curricular social engagement at program level, development of interdisciplinary courses in different study areas, and the creation of elective institution-wide service-learning courses. We are now fully committed to institutionalizing service-learning; this evolution has been accelerated by joining the uniservitate project.

#### **Sessions I 7**

25 November 2022 13:15 - 14:45

GWW1 - (0).08

Present & Discuss

Higher education, Primary education

#### **Innovation, well-being and engagement in Education**

**Keywords:** 21st century learning, Creativity, Curricula, Higher education, In-service Teacher Training, Innovations in education, Practice-based research (methodology), Primary school education, Self-regulation and self-regulated learning, Teacher thinking, Training and Development, Well-being and engagement

**Interest group:** CLOUD 02 - Educators' professional development, CLOUD 04 - Improving learning and well-being

**Chairperson:** Pieter Seuneke, Aeres University of Applied Sciences Wageningen, Netherlands

#### **First Step in Design Based Research on Social Entrepreneurship Education in Primary Education**

**Keywords:** 21st century learning, Curricula, Innovations in education, Primary school education

**Presenting Author:** Stella van der Wal-Maris, Marnix Academie, University of Applied Sciences, Netherlands

There is a growing demand on education that addresses sustainable development challenges. One way of shaping such education is by the means of Social Entrepreneurship Education (SEE). In SEE the focus is on empowering learners of all age for creating value on sustainable development issues by the means of social entrepreneurship; the entrepreneurial action is targeted at contributing to sustainable development. Practitioners indicate the need of design principles for shaping SEE in primary education. This study is the first step in a design based research, aiming at identifying such principles. Research questions are: "Which competences are key competences related to SEE in primary education?", and "What are characteristics of a powerful learning environment for SEE in primary education?". A literature study resulted in a preliminary set of competences and characteristics of a powerful learning environment. Research outcomes provide primary school teachers as well as researchers with first indicators for designing education that aims at empowering pupils with the knowledge, skills, values and attitudes to reply entrepreneurial to sustainable development challenges.

#### **Design principles for interventions to develop higher education honours students' well-being**

**Keywords:** Higher education, Practice-based research (methodology), Self-regulation and self-regulated learning, Well-being and engagement

**Presenting Author:** Jolise 't Mannetje, Saxion University of Applied Sciences, Netherlands; **Co-Author:** Marjolein Heijne-Penninga, Adenium, Netherlands; **Co-**

**Author:** Debbie Jaarsma, Utrecht University, Netherlands; **Co-Author:** Irene Visscher-Voerman, Saxion University of Applied Sciences, Netherlands

Students who experience positive well-being are more likely to be successful in their studies. Through the development of personal resources via interventions, the well-being of students can be enhanced. Central to this research is the question: What are design principles for interventions to enhance students' personal resources optimism, self-efficacy, self-regulation and inquiry mindedness of students in honours programmes? Through group interviews in three focusgroups, including students, teachers, managers and support staff, educational design principles for interventions were formulated. General principles for interventions to develop the various personal resources are: a combination of group activities and individual activities, aimed at teaching students skills to steer their own development, and a continuous character or at least activities spread over a longer period of time. In addition, specific design principles have also been formulated for each unique personal resource. Based on the design principles, educational institutions can design interventions to (further) enhance the personal resources of (honours) students.

#### **Assessing Differentiation in All Phases of Teaching (ADAPT)**

**Keywords:** In-service Teacher Training, Primary school education, Teacher thinking, Training and Development

**Presenting Author:** Trynke Keuning, Hogeschool KPZ, Netherlands; **Co-Author:** Marieke van Geel, University of Twente, Netherlands

In order to successfully adapt education to students' needs during a lesson, preparation of both a series of lessons as well as the lesson itself is essential, just like evaluation afterwards. A classroom observation alone is therefore insufficient to assess the degree and quality of differentiated instruction. An instrument was developed in which 23 indicators are scored based on a classroom observation and an interview with the teacher: Assessing Differentiation in All Phases of Teaching (ADAPT).

In this study, the reliability of the ADAPT instrument was investigated and the value of this instrument for practice was discussed. In total, 42 raters were trained and each scored five to fifteen out of 84 mathematics lessons of primary school teachers.

Using item parameters from the GPC-2PL model, we conducted a D-study into the reliability of the ADAPT instrument. Initial analyses reveal high agreement and reliability, both for the instrument as a whole as when analyzing clusters of items based on the application of underlying principles for differentiation.

Raters highly valued the training and instrument. They indicated for example that following the training led to reflection on their own differentiation practice, and provided better insight in what successful differentiation entails.

#### **Improving the feasibility of a study program using social field research and 4D-mapping**

**Keywords:** 21st century learning, Creativity, Innovations in education, Well-being and engagement

**Presenting Author:** Els Laenens, University of Antwerp, Belgium

Students of a bachelor of Computer Science program participated in this study on a voluntary basis. The central research question is 'What insights into the high percentage of student drop-out during the first semester of their study gives 4D-mapping?' To answer this question we apply social field research, a new research domain under development at MIT (Koenig 2021, Hayashi 2021). Students cocreate sculptures by embodying different roles representing important aspects that influence their study. To identify these roles students first draw field maps showing which factors influenced their study in a positive and/or negative way. Descriptive statistics was used to analyse these field maps. This study shows the impact of the quality of the semester planning (week schedules, tasks and deadlines, evaluations, classes, etc.) on students' well-being and learning. The sculptures also illustrate the very low status that students take in relation to all other roles which suggests the need to transform the relationship between course leaders and students. This research also demonstrates a possible value of social field research and 4D-mapping to get further insight in educational systems.

## Sessions | 8

25 November 2022 13:15 - 14:45

GWW1 - (0).10

Roundtable

Secondary education, Vocational education

### Teachers' Professional Development

**Keywords:** Beliefs and conceptions of teaching, Educational Policy, Professional Development, Professional identity, Secondary school education, Vocational education, Work environments

**Interest group:** CLOUD 05 - HRD & Workplace learning

**Chairperson:** Yuri Uesaka, The University of Tokyo, Japan

### Explaining Teacher Attrition at Secondary School Level

**Keywords:** Educational Policy, Professional Development, Secondary school education, Work environments

**Presenting Author:** Neline de Jong-Kroon, Open Universiteit Nederland, Netherlands; **Co-Author:** Emmy Vrieling-Teunter, Open University of the Netherlands, Netherlands; **Co-Author:** Marjan Vermeulen, Heerlen Open Universiteit, Netherlands

Teacher attrition has been a worldwide problem for decades. Research and interventions on the government (macro) and individual (micro) level did not lead to the desired improvements. The school (meso) level is worth further investigating, being the level that directly influences the individual and can be influenced by school administrations. In a systematic review study, factors at school level, dispositional variables and demographic characteristics related to teacher attrition at secondary school level were identified. Leadership, student discipline and collaboration with colleagues were the most important factors at school level; teacher efficacy, work pressure and autonomy were important dispositional variables; and years of experience, teaching/school level and school size stood out as important demographic characteristics. In order to validate the constructed conceptual model, systematic and empirical research is needed. In the current study, we develop and validate a questionnaire that cover the findings of the review study. Secondary teachers of approximately 25 schools in the Netherlands will complete the questionnaire, resulting in generated data to empirically validate the conceptual model. These insights provide input for the upcoming design of a practical instrument that can be used to predict or prevent teacher attrition.

### Hybrid tech teachers: A dialogue on promoting their professional development and its success

**Keywords:** Beliefs and conceptions of teaching, Professional Development, Professional identity, Vocational education

**Presenting Author:** Kara Vloet, Fontys University of Applied Sciences, Netherlands; **Presenting Author:** Sandra Janssen, Fontys University of applied science, Netherlands; **Co-Author:** Ellen Koop, Fontys University of Applied Science, Netherlands

As the Brainport Region of the Netherlands is eager to prepare more good qualified students for the fast growing technical workforce, it invests in attracting technical employees to spend a part of their work week to educate these students. This so-called hybrid teaching might be a solution for shortage in technical teachers and strengthening the connection between technical work field and education. In this research we first aim to investigate the expectations and experiences of the hybrid teachers in combining their two jobs and being a teacher. This part is researched by interviewing 11 hybrid teachers. Moreover, the factors that promote or impede the professional development of hybrid teachers in utilizing their potential added value as boundary crosser is researched. This part is conducted by five case studies of hybrid teachers involving interviews with actors within the technical and school organisation. These actors are team leads, HR professionals, colleagues and students. The semi-structured interviews are transcribed and qualitatively analysed. The results will contribute to interventions that promote working with hybrid teachers and support them to combine their jobs successfully.

## Sessions | 9

25 November 2022 13:15 - 14:45

GWW1 - (1).18

Present & Discuss

Higher education, Lifelong learning

### Competence-Based Education

**Keywords:** Assessment and evaluation, Competence-based education, Curricula, Higher education, Lifelong Learning, Professional Development, Workplace learning

**Interest group:** CLOUD 01 - Teacher education, CLOUD 03 - Strategies to improve teaching and learning environments

**Chairperson:** Tillmann Grüneberg, Germany

### Knowledge in Teacher Education in Social Sciences: the standardized instrument SoWi-L

**Keywords:** Assessment and evaluation, Competence-based education, Higher education, Professional Development

**Presenting Author:** Sabine Manzel, Universität Duisburg-Essen, Germany; **Co-Author:** Dorothee Gronostay, TU Dortmund University, Germany

Social Science teachers need professional knowledge to offer students deeper learning processes for understanding politics and democracy. Following Shulman (1987), the professional knowledge is differentiated into subject-related content knowledge, pedagogical content knowledge and pedagogical knowledge and can be developed during teacher education. In contrast to Maths (e. g. COACTIV), there is hardly any data on subject-related knowledge for Social Sciences with its reference disciplines of political science, economics and sociology. An instrument for evaluating professional knowledge was designed by Weißeno, et al. 2013. However, Economic and sociological expertise was not taken into account. Due to this research gap, a standardised test instrument SoWis-L was developed by Gronostay & Manzel 2019. For the first time the SoWis-L-test (71 items, multiple-choice-single-select-format) makes it possible to capture systematically and empirically the professional knowledge of teachers across the entire spectrum of the Social Science curriculum. The main study (N=500) is based on a quasi-longitudinal survey at three measurement points. There are significant increases in knowledge in Political Science and subject-didactic knowledge, but not in Economics and Sociology. There are significant positive correlations between the predictor gender and professional expertise. One goal is to encourage evidence-based research to improve the teacher education in Social Sciences.

### Obese Curriculum: The Main Pitfall in Moving Learning into Real World Practice

**Keywords:** Competence-based education, Curricula, Higher education, Workplace learning

**Presenting Author:** Morteza Karami, Ferdowsi university of Mashhad, Iran; **Co-Author:** Jeroen Van Merriënboer, Maastricht University, Netherlands

The competency-based curriculum approach has received increasing attention in various disciplines in recent decades and it has become a dominant approach in many countries. We aimed to explore the lived experiences of medical professors and students about the movement from a discipline-based to competency-based curriculum. A qualitative method was used to through selecting participants via a purposeful sampling strategy. The study was conducted at a Medical School in Iran. The results of the research showed that, the development of competencies in the students has been abandoned and this is due to focus on the cognitive domain, isolated and appended curriculum, H-shaped curriculum. An Obese curriculum is introduced to describe such conditions

### "We do not learn for school, but for life"

**Keywords:** Competence-based education, Higher education, Lifelong Learning, Professional Development

**Presenting Author:** Peter Stukker, Hanze University Groningen. University of Applied Sciences, Netherlands

Students require lifelong learning skills to increase their competence and abilities in our knowledge-based economy in which technological change appears to be the only constant. Self-directed learning can be considered a requirement for lifelong learning. The goal of this study was to find out whether students

perceived self-directed learning skills and type of mindset can be related to non-formal learning, an indicator of lifelong learning. 114 first-year international students from higher education participated in a questionnaire survey. The results indicate that there's a moderate relationship between self-directed learning and non-formal learning. Furthermore, the relationship between type of mindset and non-formal learning shows a non-significant relationship. This research sheds light on the curriculum development of higher education with regard to facilitating students as lifelong learners.

#### Sessions I 10

25 November 2022 13:15 - 14:45

GWW1 - (0).16

Workshop

Vocational education

##### **Design considerations for co-construction of learning environments at the school-work boundary**

**Keywords:** Curricula, Instructional Design and Instructional Strategies, Vocational education, Workplace learning

**Interest group:** CLOUD 03 - Strategies to improve teaching and learning environments

This workshop is suitable for educators interested in the co-construction of learning environments at the boundary of the contexts of school and work, especially for experienced educational designers. The workshop aims to improve understanding of learning environment designs, their distinctive features and the options designers consider during the design process. Participants can bring in their own expertise and gain hands-on experience with describing, characterizing, and discussing designs of learning environments. Participants are supported to develop relevant design knowledge by sharing their views on the characteristics of learning environments and by making design considerations explicit. During the workshop tools and formats are used to elicit participants' implicit design thoughts. This is done with a focus group methodology. Participants will generate considerations relevant to the design of learning environments at the school-work boundary and develop a deeper understanding to critically reflect on and (re)design learning environments. This workshop adds to current insights into how to improve the connectivity between the contexts of school and work through curriculum design. These insights may help educators to design curricula that prepare students for a future-proof, lifelong career.

##### **Design considerations for co-construction of learning environments at the school-work boundary**

**Presenting Author:**Ilya Zitter, Hogeschool Utrecht (University of Applied Sciences Utrecht), Netherlands; **Co-Author:**Erica Bouw, HU University of Applied Sciences, Netherlands; **Co-Author:**Elly de Bruijn, Hogeschool Utrecht / OU, Netherlands

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#### Sessions I 11

25 November 2022 13:15 - 14:45

GWW1 - (0).11

Workshop

Higher education

##### **Critical thinking in professional education: learning objectives and evidence-based curricula.**

**Keywords:** Cognitive Skills & Development, Curricula, Higher education, Vocational education

**Interest group:** CLOUD 04 - Improving learning and well-being

Critical thinking is an important learning objective in higher professional education, and an integral component of professional competence. Because of its broad conceptualization, educators often have questions about which learning objectives to set for critical thinking in their programme. In addition, even within educational programmes, team members often have different perspectives on what critical thinking essentially involves in the context of the profession the education is aimed at. In addition, there are often questions about how to build an effective curriculum to reach the learning objectives for critical thinking. This workshop offers concrete guidance for answering these questions, tailored to participants' educational practice, by means of the Toolbox for Critical Thinking in Professional Education. The Toolbox offers guidelines in the setting of learning objectives through a) different theoretical perspectives on the conceptualization of critical thinking, drawing mostly on insights from the fields of psychology and educational sciences; b) the connection of learning objectives to relevant professional competences; c) procedures to streamline the decision-making process. Curriculum building is supported by offering guidelines regarding structure, direct instruction, domain specificity and transfer. During the workshop, participants work with formats, focused exercises and discussion procedures.

##### **Critical thinking in professional education: learning objectives and evidence-based curricula.**

**Presenting Author:**Marion Tillema, Avans Hogeschool / Avans University of Applied Sciences, Netherlands

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#### Sessions I 12

25 November 2022 13:15 - 14:45

GWW1 - (0).09

Workshop

Workplace learning

##### **"Reflection & resonance in accelerated times"**

**Keywords:** 21st century learning, Deep-level and profound learning, Emotion and emotional development, Leadership development

**Interest group:** CLOUD 12 - Leadership in Education

*The workshop is a practice resulting from a PhD-project focusing on the reflective practices of leaders coping with complexity, accelerated times and information overload. The concern of this study is the growing importance of reflection. Leaders have to relate to an ambiguous world. They are challenged to create meaning for themselves and others in a turbulent world without having overview or quick solutions (as we saw during the Covid-crisis). The hypothesis is that new demands on leaders ask for a deeper "attention structure" and receptivity for the uncontrollable and unknown. The workshop approaches every student, researcher, professional and (project)leader as a leader; leading his/her own agenda, projects and processes in these accelerated and ambiguous times. In the workshop we share hands-on practices enabling the participants to deepen their attention and resonance in a few minutes. We introduce new methods for sensing their own intuition and feelings towards their issues; gaining ownership of their inner-reflective space. In the group-session four different layers of reflection will be explored on an individual and group-level: mental-, emotional-, physical and spiritual. The methods are a theoretical introduction followed with concrete writing- and meditative exercises. The participants will be equipped with tools for their daily practice.*

**"Reflection & resonance in accelerated times"**

**Presenting Author:** Barbara van der Steen, University of Humanistic Studies, Netherlands

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