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ABSTRACT BOOK

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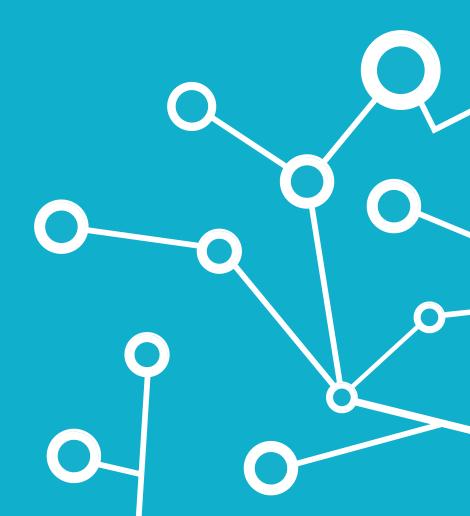Association for Teacher Education in Europe

A Future for All
Teaching for a Sustainable Society
20th – 22nd August 2018

University of Gävle
Gävle, Sweden

The 43rd Annual Conference ATEE 2018

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Education for Sustainable Development - Needs and Challenges

Professor Vinayagum Chinapah (Emeritus), Stockholm University, Sweden

It is an absolute necessity today to have "a new education discourse" in order to effective address the world's rallying cry where education plays a unique role in meeting the UN 17 sustainable development goals (SDGs) championed by the United Nations for the period 2015-2030. Our world is changing at a remarkable pace, where 40% of the world's population and three-quarters of the world's poor, mostly rural population, continue to be vulnerable to poverty, malnutrition and poor health, gender inequality, lack of education, ecological disasters, and food insecurity. Although there are some improvements, the figures that depict the status of the world's poor continue to reveal an unacceptable reality. Globally, 1.2 billion people (22 percent) live on less than $1.25 a day; 98 percent of those killed and affected by natural disasters are from developing countries, and by 2025, more than half the people in developing countries may be vulnerable to floods and storms. By the same time, water scarcity affects more than 1.8 billion people—hurting agricultural workers and poor farmers the most. There are 58 million children out of school; 781 million adults and 126 million youth worldwide lack basic reading and writing skills in 2012, and more than 60 per cent of them are women; and rural primary school-aged children are twice as likely to be out of school compared to their urban counterparts. In the conclusion of the outcomes from the 2010 Education for Rural Transformation (ERT) Symposium in Stockholm (in V..Chinapah, 2011:xiiv), the authors argued that "(D)eveloping countries have been struggling to address the challenges in education that may be described as the triad of a) access with equity b) quality and relevance, and c) efficiency and accountability. Although progress is made in every country, the shortfall in achieving the 2015 education goals in many countries indicate that the national plans and programs have to be re-assessed and re-examined to ensure that the rural dimensions of the educational agenda are adequately and specifically reflected in these efforts. The dynamics of rural transformation in the "globalized" world of the 21st century have created new educational imperatives which go beyond the traditional concerns regarding rural communities and need special attention".

Education is central to fostering sustainability and plays an important role in the development of societies, both locally and globally. Education for sustainable development is an educational model that seeks to empower people to assume responsibility for creating a sustainable future. By using a holistic approach to learning, the learners are encouraged to construct their own knowledge and understanding through active participation, allowing them to discover facts, ideas and meanings first-hand. In this way, educating the learners for sustainable development will provide the skills, perspectives, values and knowledge to live in a sustainable way.

Educational challenges and ethical dilemmas in time of academic capitalism: is "expanded professionalism" a solution for a sustainable and inclusive society?

Professor Milena Dragićević Šešić, University of Arts, Belgrade, Serbia

In today's world universities have different responsibilities and obligations. Not only that they have to be key platforms for research and knowledge production, together with its pedagogical, educational aim to educate future professionals, but they are more and more asked to participate in social and economic development while achieving its own sustainability (creating programmes that can be "sold" on the world educational market). These demands are often contradictory especially if university development and its strategies are fostering programmes "guaranteeing" employability, focusing on skills training. Curricula for employment or for present day needs neglect learning outcomes that are oriented toward critical thinking and educational needs of communities and individual students that are related to their own context and environment.

New words like benchmarks, social inclusivity, entrepreneurialism, sustainability create framework that imposes different values in both, academic and continuous professional development. Entrepreneurialism is often seen and demanded as "expanded professionalism" (Elia, September 2017) for all academic graduates as a key skill that they should bring in future professional life, the only skill that would help local development and its social sustainability. Responsibility for employment is transferred from public bodies and private companies to young professionals, artists and teachers, engineers and physicians that are now educated to be entrepreneurs in their domains. But, if the education is limited to foster skills and behaviors that are desirable in this moment, other values, mostly linked to humanities and arts education, are neglected in spite of the fact that there is no way to understand future without understanding of the past, and not real entrepreneurial initiatives are possible if student is not trained to understand contextual changes not only of today but also of future.

This paper starts with hypothesis that contemporary educational practices and research are under strong public policy influences, limiting university's autonomy and limiting diversities in approaches that are needed for different sociocultural contexts. In present globalized world, universities are looking more and more to compete with each other, not to develop itself according to their values and needs. A critically engaged university is the one that should be proactive in creating new debates and discovering new challenges within globalized but still diversified world. In this respect, teachers' training is the most difficult part of university education as it is crucial for the future life of the community offering values, concepts and tools to those professionals that are going to be in the "battleground" – mediating ideas of the past (community culture of memory), discussing present day challenges and ideas for the future – educational perspectives to young ones.

Teachers are key social and cultural agents in society that is changing so quickly in its demographics, attitudes, and policy orientations. Even the facts about the past have to be reinterpreted and recontextualized, often by using participative research methods, social discussions, public debates questioning societal norms, ethical controversies. Thus, not only human rights but also social justice, has to be part of these discussions, as well as numerous questions that are coming with new migrations and other global challenges, while schools and universities have to find ways to refuse different pressures of the "cultures of management" (Protherough and Pick 2002:49) that would make their organization more marketable, profitable and efficient. Because of that, teachers' training and their continuous professional development had to provide opportunities to remix the knowledge (Lessig 2004) in the age of access (Rifkin 2000), knowledge that is created by multiple social agents in all sectors overcoming disciplinary boundaries and bringing ideas "in from the margins". That would be the only way of educating new educational professionals that will be capable to link research and teaching practices, always challenging and questioning present paradigms and imposed frames – acting in a public interest and against "academic capitalism" (Dragićević Šešić 2017).

Teaching to sustain and to disrupt: education in times of systemic global dysfunction

Professor Arjen Wals, Wageningen University, The Netherlands

How do we teach young people to live well, equitably and within planetary boundaries; when structures, values and assumptions upon which we are building our lifestyles make living in such a way nearly impossible; when we as educators don't really know either and don't live in that way either; when there is confusion, sometimes intentionally created, about how dysfunctional and urgent things are and what should be done? And how do we prevent that we all slide into a stage of permanent fear and despair since the challenges seem so overwhelming?

What is becoming increasingly clear is that sustainability is not something that can be taught, that it is not only about sustaining what we might deem to be good, but also about disrupting what forces us to live in unhealthy ways. Creating environments that 'breathe' sustainability and a culture that invites critical thinking, transgression and action, is becoming a new challenge for our schools. In this talk I will outline a systemic response from education that involves the whole institution as a part of a wider community and require boundary-crossing and forms of learning that are transformative and transgressive learning. I will also discuss the kinds of capacities teachers and students alike, will need to deal with complexity, ambiguity, socio-scientific disputes and to facilitate boundary crossing within a critical whole school approach.

Internship Experience through "University within School" Model

Zelha Tunc Pekkan, R. Didem Taylan, Simge Sohtorik, & Bengi Birgili, MEF Universite, Turkey

"University within School" (UwS) Model is based on the partnership between the universities which are the centers of scientific knowledge production and the schools as workplaces where teaching profession is performed. The six main goals of the model are: (1) To educate knowledgeable, skillful, and virtuous teachers to teach all students, regardless of how diverse they are. (2) To provide professional development for K-12 teachers through graduate studies, in-service education, co-teaching and joint research projects. (3) To provide professional development for college faculty through teaching and co-teaching in K-12 classes, doing research on local educational problems. (4) To facilitate the collaboration of college faculty, school teachers, and teacher candidates to conduct research studies on local educational problems and develop solutions. (5) To improve student achievement in partner schools. (6) To create a signature model of teacher education, which can inspire teacher education programs in Turkey and around the World (Özcan, 2013). Many countries have identified one of the most important factors related to school success as the effect of teacher. Teachers' readiness-for-the-job and their professional development are key building blocks in the development of effective teaching (Darling-Hammond, 2017). Doing internship within this model, predominantly the last two years of the four-year program [four academic terms] is compulsory. The third-year internship is scheduled to be 2 and a half day, and the fourth year is scheduled for 3 full days. The purpose of this study is to examine the professional acquisitions that the teacher candidates gained over the course of the semester in the authentic Internship courses developed through University within School Model by using theoretical frameworks in the literature [e.g. reflective thinking, pedagogical content knowledge (Shulman, 1986)]. 17 mathematics teacher candidates were placed in public and private schools as interns. The expectations from 3rd year teacher candidates were (a) to observe the practices of the mentor teacher, (b) to assist the mentor teacher in education and teaching-related issues, (c) to tutor students who need academic support, (d) to complete practice-based assignments and from 4th year candidates were (d) to plan, teach and reflect whole class teaching. In this study, the practices of school experience were applied in an intensive manner in accordance with the model as mentioned above. These practices will be shared by giving examples of the teacher candidates' experiences and presentations, by supporting the results of the surveys conducted with the mentor and teacher candidates. The teacher candidates' knowledge and professional acquisitions will be examined and shared through their portfolio analysis. Finally, we will discuss our first-hand experience with other teacher trainers, faculty members, academicians, educators regarding our teacher education model.

The contribution of placement on the development of student teachers' subject-specific competence

Kirsten E. Thorsen, Oslo Metropolitan University, Norway

The aim of the study is to examine how placement contributes to the development of student teachers' subject-specific competence. Intentions in the teacher education reforms of 2010 and 2017 in Norway is to strengthen the student teachers` subject-specific competence. To achieve this teacher education is to facilitate for student teachers` development of such competence through learning processes on campus and in placement (Kunnskapsdepartementet 2010 and 2017). The study is a subproject of large-scale project ; Teachers` Proffesional Qualifications (2012-2016), funded by the Research Council of Norway`s PRAKUT programme. This particular study draws on data from a survey with 84 student teachers in the last year of teacher education and in-depth interviews with six of them. The findings will be discussed in the light of comparable research (Raaen & Thorsen 2016, Thorsen 2016 and Heggen & Thorsen 2015). Theoretical perspectives are related to; research of

placement as a field of learning and placement teachers` role as mentors in teacher education (Darling-Hammond, 2010, Feiman-Nemser 2001) ; research revealing tensions between research- based and experienced-based knowledge (Grimen 2008 , Korthagen, 2008, Shulman 1986); research on professionality and professional identity (Gee 2010, Heggen 2008).

The study shows that there to a small degree is attention paid to specific subject themes during placement, and a tendency is that the student teachers experience to be superior to their mentors to subject knowledge. Placement is about learning to manage the daily general tasks of the teacher more than a as a process of professional learning that requires an interaction between research-based and experienced-based knowledge. The study gives new suggestions of relevance to Nordic educational research regarding the issues of what is valid knowledge in the development of professional competence in teacher education.

Collaboration between ITE students during practice – Possibilities and barriers for productive learning

Sandra Jederud, Mälardalen University, Sweden

A new organization of school-based education (SBE, i.e. practicum) within Initial Teacher Education at universities taking part in a pilot project in Sweden, have lead to changes concerning the placement of ITE students. One of the implications in the project is that ITE students are to be involved in peer learning with fellow students. The aim of this study is to explore how ITE students at one university perceive given prerequisites for peer learning, what the perceived benefits are from peer learning as a learning community and what drivers and barriers are perceived for peer learning as a reciprocal phenomena. This during SEB in a new organization where placing students in numbers of one to six at specific practice schools has been one of the arrangements used. To begin with, a conceptual framework for peer-learning is outlined. The framework is inspired by general didactical questions like prerequisites for peer-learning, what are the perceived benefits drawn and should these take place in real life meetings or via IT. The benefits of practicing features during teacher education where a supportive collaboration takes place between equals, creates opportunities to enhance student´s relational skills before entirely approaching the profession. The informal setting within teacher education allows students to improve their reflecting skills through trial and error (Martin & Double, 1998). These experiences allow students to bring upon knowledge from earlier peer learning situations when later working alone in class and lead to student teachers enhancing their abilities to organize and manage class situations (Vacilotto & Cummings, 2007).

Data was collected in spring 2018 from ITE students attending their third and final period of teacher practice within ITE in preschools. Qualitative research methods were used by semi-structured interviews aiming to provide openings where respondents´ answers could lead in different directions. Conclusions and findings from the study show that there organizational issues to address at ITE such as placement of ITE students in order to provide prerequisites for peer learning. Also organizational conditions at practice school for peer-learning during SEB show that all of the respondents reported having reflective discussions with peer ITE students, however, how organized, varies a great deal between the different specific practice schools. Concerning how peer- learning is implemented content wise within SEB, answers show that a majority of the respondents evaluate performed activities with other ITE students, however only about half of the respondents plan and observe these activities together. Finally, when it comes to developing peer-learning within SEB according to ITE students, reflections that emerged emphasized structure and clear guidelines from ITE to the specific practice school.

Case-based teaching (CBT) in interprofessional education - a literature survey

Inger Ulleberg, Ingvil Øien, Oslo Metropolitan University, Norway

At Oslo Metropolitan University 2017/2018 we started the project INTERACT (Interprofessional interaction with children and youth, https://interact.hioa.no). INTERACT focuses on teaching and learning in higher education. Students from different professional educations that comprise professional work with children, youth and their families are gathered in interprofessional seminars and group-work. The project will develop case-based teaching (CBT) as one of the teaching methods, and we will establish a knowledge base for this work through a literature review.

In preparation for developing the cases for use in the project, we will study research on case-based teaching in interprofessional teaching internationally. Research on CBT in different professions may also be of interest to develop a comprehensive understanding of the field. We ask the questions: What are the theoretical and pedagogical foundations for CBT in interprofessional education?; Why is CBT a recommended approach in interprofessional education?; How to construct cases of relevance for teaching and learning in INTERACT?

We expect that CBT can be understood within a variety of theoretical frameworks, and one of our interests deal with making an overview of these. We will explore the theoretical and pedagogical foundations for CBT and connect this to our already established theoretical framework concerning the theory-practice understanding. As a point of departure we build on Etienne Wenger's theory of community of practice (Wenger, 1998), Donald Schön's concept of the reflective practitioner (Schön, 1995) and Harald Grimen's ideas on practical synthesis (Grimen, 2008).

Literature surveys can be carried out in different ways, and to get an oversight of a field the narrative literature survey is recommended. We will therefore carry out a narrative literature survey, where we will select metastudies and central articles and follow up threads of interest for our research questions. We will document entry words and databases, and present an overview of the included. We will perform comprehensive study, interpretation, comparison and discussion of the chosen literature. Through this study we expect to develop a theoretical, research-based foundation for developing case-based teaching in interprofessional learning context.

There is a need to develop teaching approaches enhancing interprofessional cooperation to support the students' skill in collaborating on a child's/a group of children's learning, development and/or health. The call for interprofessional collaboration where education is included is of importance. This work should start in the initial professional education, and case-based teaching could be a central method in creating this.

A Study of Differences in Perception of Sexuality education between Students in Teacher training courses and Teachers

Shiraishi Ai & Minako Isomura, Hiroshima University, Japan

The purpose of this study is to indicate the differences in the perception of sexuality education between students in teacher training courses and teachers in schools. Many authors have emphasized that sexuality education should be done comprehensively (Smyile et al., 2008; UNESCO, 2009; Weaver et al., 2005). With regard to teachers, owing to lack of confidence and skills in sexuality education practice, they may not be convinced of the necessity of implementing sexuality education or may not advance and practice it (UNESCO, 2009). Also, Kirkendall (1956) states that training in qualities for teaching sexuality education is important. However, sexuality education has not been dealt with sufficiently in teacher preparation courses and in-service training for teachers in Japan. Furthermore, there are few studies on the content of sexuality education in pre- and in-service teacher training, so we need to conduct research.

As a basis for this study, the theory on the role of teachers in sexuality education. Aransiola (2013) states that they play a significant lore in the development of sexuali-

ty education. Also, sexuality education of Mamiya (1995) was judged as an appropriate theory. He says that sexuality education involves biological and anthropological aspects and spans three areas: sexual physiology, sexual psychology, and sexual society. Hence, in this study, we classified the contents of sexuality education from these three viewpoints and used it as the theoretical framework of the study. We conducted the research from December, 2017 to January, 2018 using as subjects eighty third- and fourth year students at teacher training courses and fifty-nine teachers in schools, administering a web-questionnaire survey about sexuality education. This questionnaire survey consisted of thirty-two items about what should be included in sexuality education and additionally four questions about each item; 1. Whether or not classes were taken; 2. Whether or not classes were given; 3. Needs; 4. Difficulty of teaching.

From this study the following three results were obtained. First, there was little difference in perceptions of sexuality education between students in teacher training course and teachers. Second, both of them may not perceive the physiological and social aspects of sexuality as an important part of sexuality education. Third, "sex" was thought necessary, but it was hard to teach for them. These results indicated the necessity of conducting comprehensive sexuality education mainly on the physiological and social aspects of sexuality in teacher preparation courses and in-service training for teachers.

There are two possibilities for development of this study. First, there is a need to enhance the content of sexuality education in teacher preparation courses and in-service training for teachers. Second, there is a need to foster the qualities for teaching sexuality education in teachers. However we have only a limited amount of time to devote to sexuality education. Therefore, there is still leeway for research on the content of sexuality education in teacher education, and we need look to results and suggestions from research being conducted in countries around the world.

Using Films in teacher training for developing instructional activites

Belgin Osaydinli, Kocaeli University, Turkey

This study is about ELT activities developed by pre-service English teachers during an elective course at Kocaeli University, English Language Teaching department. A 14-week undergraduate course, "Film Analysis through Linguistic Base", is designed in the English Language Teaching Department at Kocaeli University for implementation for a period of eight years. The course is in the final grade of their education after they have mastered their professional courses such as didactics, developmental psychology, curriculum development, class management, educational technology and design, etc. In other words, they know how to design a lesson and develop activities in accordance with student needs, behavioural objectives of the course and class level. The aims of the course are: To create a new context for pre-service teachers to develop foreign language activities through films; To develop their critical thinking abilities and their creativity through films.

People have different purposes to watch a film; some people watch them to be informed, some have aesthetic reasons, some watch them just for fun. Whatever the reason, films provide a rich context for people to talk together and exchange ideas since it is easy to access them. Using a film in education does not mean just sitting, watching, pausing and being asked questions by the teacher such as what is going to happen next. That's why this course designed for English Language Teaching department is based on how to use films in lessons and how to get benefit from films, especially for pre-service teachers. Rather than following the steps and instructions and practice the activities some others define, this course makes them find their own path to find different usages of the films for educational purposes.

The method used to reach the aims of the course is solely based on the analysis of the films from different aspects. Each film is based on different thematic content to reinforce and consolidate topics treated within the language syllabus, such as education, ecology, the changing role of women in society etc.; different terminology and different grammatical and functional aspects of the language. The course includes three stages. The first stage, which lasts two weeks, involve the explanation of some basic terms related to film analysis by showing sample scenes chosen from different films. The aim of that stage is to inform students how films are constructed and about the aims and the procedure of the course since the course is different from the traditional ones. The second stage of the course, which lasts five weeks, focuses on the analysis of various five films from different genres. The aim of this stage is to help students how to analyze films in

different perspectives and to show how each item in the films contribute to our understandings. All students watch the movie together in a separate room that is specially designed for watching films or theatrical performances at a specified time other than their course hours. A framework including literary, dramatic, cinematic, cultural and language aspects of the films has been developed as it provides a rich source for examining different aspects of a film. The role of pre-service teachers in literary aspect is to read the movie as though it were a piece of literature. They discussed plot, characters, setting, themes, point of view, recurring images, and symbols with their groups. Some examples of the questions they dealt with in literary aspect are "Briefly summarize the plot", "What symbols do you notice and what do you think they represent?" Their role in dramatic aspect is to read the movie as though they were a member of the Academy. They looked at the dramatic aspects of acting, script, costuming and make-up, set design, music and direction. Some of the questions they dealt with are "How does the music contribute to the storytelling?", "How well are the characters portrayed?" Their role in cinematic aspect is to read the movie as though they were filming it. They looked at the technical aspects, sound, editing, and special visual effects, of the film. Some questions in this aspect are "How do the camera angles and movements help or hinder the story?", "What vivid visual images did you note and how did they make you feel or think about?" Their role in cultural aspect is to read the movie as though they were a sociologist or anthropologist and do a research about that culture being filmed. Some questions in this aspect are "What conclusions did you draw about the socio-historical background of the film?", "What

examples in the film show the political factors that may cause its making". Their role in language aspect is to read the movie as though they were a linguist. Some questions are "How are the forms of language used in the film?", "Are the dialogues or non-verbal language more effective to understand the message".

In the third stage of the course their role in teaching aspect is to read the film as educational aid for their future career. This paper is about the ELT activities developed by pre-service teachers during the third stage. The aim of this stage is to make students create their own activities; develop their language competence and professional abilities using films on behalf of education. In that stage of the course pre-service teachers are invited to design a lesson plan including learner age, learner level, the skills they aim to improve and the process of the lesson. Each group is told to create different activities, games and tasks based on each aspect mentioned in the framework above. They are also supposed to create original activities and tasks that they can use in their teaching career by taking one scene, one frame, one quote or the film itself and adapt it to language skills: grammar, reading, vocabulary, etc.. This work is especially important since all of the students are prospective teachers of English and they can use those works when they become teachers. By creating different activities using films, they can create different atmosphere for their students in the future. In this stage, they perform all the activities and tasks they have created. These activities show how films can be helpful for students to display their creativity. In this paper, some selected activities developed by pre-service teachers will be presented in order to recommend some practical and creative ideas for language teachers.

Teacher education in an age of "we" and "they": What does self-study in teacher education practice(S-STEP) provide?

Masahiro Saito, Asahikawa University, Japan

Now our society all around the glove has been divided politically. Political leaders are using fear to promote hatred to others. People also stay inside of their community with "same value" and regard those from outside of their community as harm and dangerous. In Donald Trump's first year as president, social gaps based on government, race, immigration, national security, environment, sexual orientation, economical markets, international trade and other issues have been intensified.

In the other side of the glove, when Japanese Prime Minister Shinzo Abe was confronted by chants to step down during a campaign of Tokyo Metropolitan Assembly, he raised his voice, "We cannot lose to people LIKE THIS." Under the governance of his cabinet, the Ministry of Education, Culture, Sports, Science and Technology[MEXT] inquired about the lecture provided at a Nagoya city junior high school by the former vice minister of MEXT who has fiercely criticized Abe administration. These incidents have a common phenomenon in which those with more power promote one-sided opinions and/or hatred. Then they suppress others with a different opinion using their power. This could break down democratic education and altered it to state controlled education.

Teacher education has apparently been powerless to

this social phenomenon until these days. Teacher education is traditionally regarded as delivering "tips and tricks" of seasoned teachers to students of teaching. Currently, it sounds all the works to train teachers responsible for PISA like competency based education, which is favored by the business community. Educational philosopher, Gert Biesta (2006; 2010; 2013a; 2013b) warned that learnification undermines education. This warning applies to the work of teacher educators and teacher education(Saito, 2017).

Self-study in teacher education practice(S-STEP) is about examining the relationship between professional knowledge and practice. Importantly, S-STEP could approach the arrangement of schooling; how the knowledge is constructed, adopted, evaluated, and used. It is also about how teachers bring about change in their current context. Self-study is a pedagogy to create democratic education. It is through self-study that teacher education and teacher educators could become the agent for social change. This paper explores first the idea of Mitchell Foucault, then philosophy of education developed by John Dewey and Gart Biesta. Then it turns to the idea of pedagogy of teacher education developed by Fred A. J. Korthagen and self-study in teacher education practice(S-STEP).

Understanding Missing Children: how can educational institutions contribute?

Tijana Borovac, Faculty of Education Osijek, Croatia

In the European Union, a child is reported missing every 2 minutes. To support children and families at this crucial time, a hotline for missing children was set up in Europe available through the same number in 31 countries: 116 000 (Missing Children Europe,2017). Missing and exploited children represent an important societal problem including parents, teachers, policymakers… A child can be missing for many reasons, and the problem of missing children is far more complex. According to Missing Children Europe there are five major types of missing

child cases exist: abduction by a third person; family abduction; runaways (national /international); missing unaccompanied migrant minors; injured/lost or otherwise missing child. Children taken by strangers or slight acquaintances represent only one-hundredth of 1 percent of all missing children. Far more common are children who have run away, have gotten lost or injured, have been taken by a family member (usually in a custody dispute) or simply aren't where they're expected to be because of a miscommunication. The majority of missing children

are suffering from extreme and long-lasting conflict in their families. They run away or are pushed out because they are in fight with their parents and siblings, friends or because they are victims of abuse and neglect. They are taken or held by parents battling fruitlessly over custody rights. So our response to missing children has to be about much more than bringing them home. It should include parenting education and other support programs that help build strong families and prevent problems in the first place. It has to include resources — such as family therapy, mediation and child protection — that help to resolve conflicts.

When it comes to the existing practice of protecting and safeguarding children exposed to risk factors in Croatia, data reveals the existence of certain problems such as the lack of experts working directly with children and families, human trafficking also reaches high in the previous period. The Republic of Croatia use to be only a transit country, but in recent years noticed the change in this trend and the Republic of Croatia is increasingly emerging as a country of origin and final destination of trafficking victims. In this poster we will present project „116 000 Hotline for Missing Children Croatia", which main objective is to contribute to reducing the occurrence of the disappearance of children or minors in the Republic of Croatia and contribution to the more effective finding of a child in the event of disappearance. Specific objectives of this program are: 1) Prevent of disappearances and runaways from family homes and social welfare homes; 2) Awareness raising and sensitizing the public about missing children problem, children trafficking and other situation in which children rights are abused or neglected; 3) Establish and maintain cooperation between educational institutions, civil society organizations and relevant stakeholders in order to address missing children problem multidisciplinary.

"Transmitting" theory through collaborative ethnographic research in a second chance school

György Mésáros, Eötvös Loránd University, Hungary

The aim of this research was to transmit important and useful theoretical approaches to teachers in a second chance school who work with disadvantaged Roma pupils. This paper will describe the social constructivist process of theory building with teachers. The paper is based upon a theory of learning that connects critical pedagogy and social constructivism. Teachers professionalism are interpreted in a system critical framework. The whole study and the theoretical dimensions transmitted draw upon different theoretical and methodological traditions combining the whole school approach (Tibbitts, 2015) with critical pedagogy (Freire, 1970), adaptive school concept (Rapos et al., 2011) and collaborative-participatory ethnographic research paradigm. (A special focus is given to the nature of power relations in connection to the RDC's tradition.)

The epistemology of the inquiry is characterized by critical and participatory dimensions, and the methodology is based upon action oriented collaborative ethnography. Research methodology and teachers' learning are strongly connected, and the very methodology is part of the findings: the paper will present how teachers can develop and learn through a collaborative research process. One of the goals of this research was to transmit the conceptual base of the above mentioned theoretical perspectives (critical pedagogy, whole school approach for democratic governance and adaptive school concept) for an institution that had been not familiar with it. We chose not to transmit the key theoretical, conceptual knowledge in a direct way. We departed from the problems experienced by the teachers, and we tried to find ways of development together. It was an empowering co-construction of a conceptual framework. During the conversations we gave our input, but it was not simply transmission of an unknown concept to the "tabula rasa" of teachers' mind. The teachers had already had different elements of these approaches in their interpretations and implicit theories. Through our presence, conversations and meetings with the teachers, a knowledge construction process was developed that started to create new dimensions of common understanding and meaning-giving. These new dimensions were embedded in the already existing frameworks of socially constructed knowledge about schooling, but it also challenged them in a dialectic way.

This social constructivist approach that departs from the problems and interpretations of the stakeholders and carries on a joint effort of dynamic meaning giving seems an appropriate method if we would like to get people familiar with conceptual frameworks in school settings. Nevertheless, the new dimensions can be challenging, especially when they represent a different interpretation of schooling from the usual ones, and can meet some resistance, too. Since, it is not an indoctrination process, resistance is not a problem, but an opportunity to discuss,

raise questions and maintain the process of dynamic interpretation. This way of theory building in a disadvantaged context might be relevant in different education research projects where collaboration and reflections on power relations are crucial.

Knowledge and Attitudes toward Gender Equality among Students in Initial Teacher Training in Spain

Cristina Miralles, Maria C. Cardona-Moltó, Esther Chiner,
University of Alicante Spain

Gender equality is one important human right and social justice principle (UNESCO, 2015). Men and women are biologically different, which is reflected in the concept of sex, and may embrace specific socially constructed roles, which are captured in the concept of gender. However, biological and other differences between them should not give raise to social, cultural, political and economic inequalities and discrimination. Since the 1960s, several initiatives have been taken at global, regional and national levels to address gender equality, and many countries have signed and/or ratified international agreements to promote this basic right.

One important step towards achieving gender equality is to mainstream gender in the education process through curricula and teacher training. This requires that educational institutions adopt responsive policies and plans, and transform pedagogical approaches. Mainstreaming gender equality in teacher education institutions is crucial for two main reasons. Firstly, gender equality is a priority on the international development agenda, and secondly, teachers are central to the education system for the key roles they play in the transmission of values, knowledge, and the development of human potential and skills. Spain is a country that has achieved impressive gender equality in education (Organic Laws 1/2004 and 3/2007), however, in practice, the implementation of a gender perspective in teaching is not satisfactory. Successful mainstreaming of gender equality cannot be achieved without giving future teachers the necessary knowledge, tools, and awareness to understand and tackle gender stereotypes. This study seeks to answer the following research questions: (1) How do student teachers perceive gender issues and gender equality in their institution? and (2) What is their level of knowledge and perceived competence about gender equality? The study was a university-based descriptive cross-sectional study carried out at one institution of teacher education in the Valencian Community, Spain. Participants were 175 kindergarten and elementary student teachers enrolled in their first, second, and four year of study, representing the cohorts of the academic year 2017-2018, who anonymously and voluntarily completed the survey at the beginning of one of their classes after permision were gained. The Knowledge and Attitude towards Gender Equality (KAGE) scale was specifically designed to be used in this study. The KAGE survey initially included 65 questions asking respondents for their degree of agreement on gender issues based upon a 6-point Likert-type scale ranging from Strongly Agree to Strongly Disagree. Currently, a pilot study is being carried out to determine its reliability and factor structure.

The results of the study will be summarised according to the research questions 1 and 2 and will provide insight to propose changes and improvements to infuse gender mainstreaming and equity in theacher education programmes.

Reading speaking photographs in preschool pedagogical documentation

Catarina Wahlgren, Centre of gender research, Uppsala Universitet, Sweden

My poster pays attention to photographs used in everyday pedagogical documentation in preschool, and to how picture analyses of these can be conducted from an intersectional perspective. The presentation is assigned to the ATEE RDC of social justice, equity and diversity and is an initial phase of a project addressing preschool children´s perspectives on pedagogical documentation. The choice of method proceeds from the idea that there is no neutral gaze (Haraway, 1988), no pure sensory channel of experiencing or knowing from vision (Pink, 2007). Knowledge is constructed from particular perspectives. My study presupposes photographs as stories told about children. In the terms of social-constructive theory, these stories contribute to the identity construction of children. The study aims to investigate if different stories are told about children depending on sex, class and ethnicity.

I have chosen pedagogical documentation for this study as it is a widely spread work tool in Swedish preschool, also recommended by authorities (Skolverket, 2016). It often uses photographs of children, which are posted and available for reflections by children and adults. Pedagogical documentation aims to make the competent, learning child visible, but also to make the preschool practice visible for improvement. In addition, it is expected to contribute to strengthen children´s participation. This should be understood in the context of the Swedish preschool system, which is known to have an explicit equity potential which can last for children through life (Jensen et al., 2009), and an equity mission, outlined in the Swedish preschool curriculum.

Previous interview studies of pedagogical documentation mirror preschool teachers' point of view, either raising possibilities, or listing difficulties with the work tool (Lindgren Eneflo, 2014 f e). Some studies try to catch children´s perspectives by giving children cameras (Magnusson, 2017) or presupposing documentation as a normalizing practice in the theoretical light of children´s rights (Lindgren and Sparrman, 2010). The present study will immerse these perspectives by deconstructing photographs and analyze children´s positions and range of agency. This can be a particularly good method to catch children´s perspectives as visuality is a language that can be both read and written by children. By using this method I will show how a dominant work tool can strengthen or counteract curriculum value missions.

Practices of distinction in science education as a result of subject-cultural practice and school regulations

Ilse Bartosch[1], Malte Hüsing[2], Anja Lembens[1], Bernhard Müllner[1], Agnes Turner[2]. [1] University of Vienna; [2] University of Klagenfurt

Following Judith Butler (1990), gender is an amalgam of political regulation and discursive and cultural practices. These regulations are reflected in patterns of perception, beliefs, conventions and practices of specific scientific disciplines well as in school regulations and norms. They are embedded in teachers' implicit theories about teaching and learning and their conception of the subject taught. These implicit theories determine the discursive and cultural practices of teaching (Gess-Newsome, 2015). By deconstructing these practices the underlying symbolic order and the associated power relations can be reconstructed, and discrimination mechanisms that shape the (subject-)teaching can be revealed.

On the basis of the reconstruction of a teacher's specific biology lessons, it is shown how the specific design of the initiation into the university subject influence teaching routines. Furthermore the (often emotional) motivational reasons for choosing biology as a teaching subject are in conflict with the disciplinary conception of biology as a "hard science" (Kastenhofer, 2004). If not solved, this dilemma leads to upheavals in the lesson design. The thereof resulting practices interfere with the perceptual

patterns, norms, habits, and common routines in the institutions of education. As a consequence differences in learning and motivation are produced along the categories gender and natio-ethno-cultural background (Mecheril & Hoffarth, 2009). The data is based on a group discussion, audio recordings of lessons, lesson observations, interviews and a 'study' written by the teacher as part of a two-year continuing education program. The (transcribed) data is analysed and interpreted by an interdisciplinary research team based on the documentary method (Bohnsack, 1998/Nohl, 2012/Przyborski, 2004) and discussed in the form of a case study (Yin, 2009).

When vocational training leads to greater justice and social equity

Melanie Tocquille, Iperia Institut, France

For more than 20 years, in France, IPERIA the Institute, the National Institute for the professionalization of family jobs, coordinates and models at the national level the professionalization of home-based jobs under the mandate of two professional branches: the branch of maternal assistants and the branch of the employees of the particular employer. IPERIA the Institute supports 272 training organizations certified throughout France and overseas territories. He is a certifier of 3 V-level professional titles available through training (521h) and Validation of the Acquired Experience that are maternal assistants, childminders, life assistants and family employees.

The majority of employees in the sector, 98%, coming to train are women. They are on average 45 years old and come mostly from immigration and have a very low level of education. Long regarded as small trades, the home help professions are said to be naturally feminine and socially invisible even though these trades are today guarantors of social ties and fight against the social isolation that some people, such as the elderly, can suffer.

Since 2013, we have been conducting a project initi-ated with the Department of Support for Foreigners and Nationalities, under the patronage of the Ministry of Foreign Affairs and with the European Integration Fund on what is called French Professional Skills. In fact, a relatively large number of employees in our sector suffer from difficulties in French, which sometimes hinders their integration into the profession and with employers. It also refers to their necessary security at home and the importance of understanding the prescriptions in their daily missions, particularly in terms of home-based risk prevention for them or for the people they care for who can be among others children, adults with disabilities and the elderly. This project led to the mapping of the professional skills necessary for the exercise of their profession. An action research conducted around this project showed how the involvement of women in this project contributed to their social, economic and professional integration. It is by learning a job, combined with enhanced language skills, that these women today have the opportunity in their daily lives to conduct activities with greater confidence, independence and autonomy.

Multicultural Practicum Groups and Internationalisation of Teacher

Gerd Wikan, Jørgen Klein, Inland Norway University of Applied Sciences, Norway

The overall objective of the MUPIT project is to enhance the students' intercultural and global competence as well as increasing internationalisation at the institution. Nordic classrooms have become more diverse due to immigration from both European and non-European countries. The increasingly diverse classrooms imply new challenges for teachers and teacher education. An international practi-cum is one of the most effective ways to transform learners' perspectives and prepare them for work in a diverse classroom, but it requires supervision and intervention. Inland Norway University of Applied Sciences' long-term experiences with international practicum has shown that immersing students in another culture without intervention does not automatically make them interculturally

competent. We will present results from trailing research on international practicum, that show that preparation of students before departure, as well as close supervision during and after the placement has a significant bearing on the learning outcome.

Furthermore, we will present a new development: multicultural practicum groups. The multicultural practicum groups will comprise of Norwegian and foreign students. In these groups, global and intercultural learning will be ensured through peer reflection and joint supervision. With this project, we wish to establish multicultural practicum groups, cross-cultural meeting points and joint supervision as means to improve quality of international practicum in teacher education. The multicultural practi-

cum groups will comprise of Norwegian and foreign students. In these groups, global and intercultural learning will be ensured through peer reflection and joint supervision. The outcome will be improved supervision intervention during practicum as well as the development of an international joint preparation course. By doing this we aim to improve curriculum and teaching methods in collaboration with international partners. We further aim to increase the number of staff and students that are involved in international practicum within the framework of strategic partnerships. Other expected outputs are workshops for students and supervisors, video conference meetings and the development of joint frameworks for international teaching.

"I think that all these sustainability goals; it is a matter of giving something to others" (Mia 16 years)

Guðrún Jónsdóttir, Anne Kristine Byhring, Norwegian University for Life Sciences, Norway

We are in a science classroom in an upper secondary school (year one) situated in a suburb of Oslo. The quote is a sequence from an audio recording (30 minutes) of a dialog between Mia and her classmate Sara. The class is culturally and socioeconomically heterogeneous. Fourteen out of eighteen students are born in Norway; while ten of them have, one/both parents born in a non-western country. These students, among them Mia and Sara, self-identify as foreigners. The task given by the science teacher to the class, working in pairs, is to explore six UN`s goals for sustainable development. Taking departure from this dialog sequence, we explore and discuss the sequence the implication of student diversity in Education for Sustainable Development (ESD).

We analyze the dialog sequence with inspiration from postcolonial theories and concepts of othering. Othering understood as a process of differentiating between "us" and "them". Further, we use Bhabha's (Bhabha, 1994) notion of the Third Space to explore the classroom discourse. Using three broad views, described by Hopwood, Mellor, and O'Brien (2005), on the nature of necessary changes needed to achieve SD; we discuss approaches in education for reaffirming democratic practices and enhance student diversity in ESD perspectives in Science education. The material originates from an ethnographic study. Data was collected through mixed-method

approach. Including observations, audio recording of students talk, written student assignments, dairies along with semi-structured interviews. This empirical material was scrutinized using thematic analysis in order to identify and analyze patterns of meaning (themes). Following Braun & Clarks six-phased process of coding and theme development guided by the following research question: How do these girls relate relate issues in SD to their own experiences and in which settings do they refer to these experiences? The six goals assigned to the girls include varying levels of and references to natural science competency. During the discussions, natural science competency is almost completely absent, regardless of which goal they are discussing.

The girls repeatedly explore the topic of how they can become "better citizens in a sustainable society". The discussions do not progress past an individual level. Societal and political aspects appear to be missing entirely from the discourse, with one exception; towards the end of the 30 minute, long discussion Mia raises the subject of different political frameworks. Their understanding of ESD seems to be marked primarily by "reform", and does not locate the root of the problem in the nature of present society, but in imbalances and a lack of knowledge and information. (Hopwood, Mellor and O'Brien. 2005, 16)

Student teachers, culture and interaction

Liv Susanne Bugge, Morten Løtveit, Inland Norway University of Applied
Sciences, Norway

There is growing diversity in European schools and kindergartens. Teachers and student teachers often belong to the majority culture, while students and children have more diverse backgrounds. We should therefore train student teachers in multicultural awareness. This makes it necessary to inquire into student teachers' knowledge and attitudes regarding multicultural society. For this purpose, we conduct a quantitative panel study. The topic of this paper is student teachers' ideas about culture and cultural interaction. To what extent do teacher students view culture as dynamic? To what extent do they consider the cultures that individuals were born into as something that mark them throughout their entire lives? Under what circumstances do student teachers think that conversations about faith, values and moral between people of different cultural backgrounds should be encouraged?

We regard multicultural awareness, the key concept of this study, as an aspect of intercultural competence (Spitzberg & Changnon 2009; Deardorrf 2006; Løtveit & Bugge, 2015). Certain forms of multicultural awareness, however, may go along with essentialist or decontextualized understandings of cultures. A different kind of multicultural awareness, involving understanding of cultures as dynamic, and to some extent as hybrid, may be more promising (Hoffman, 1996).

We gathered data in 2014 and 2017, using structured questionnaires. The majority of the student teachers at a Norwegian teacher education institution, attending different educational programmes, participated. (Bugge & Løtveit, 2015). The questionnaires are analysed by the use of SPSS. In spite of important nuances and ambiguities, the students demonstrate relatively dynamic understandings of culture and are positive to intercultural interaction. This was even more so in 2017 than in 2014.

Dialogic teaching, creative thinking, power at micro and makro level

Hanneke Jones, Newcastle University, UK

This paper is based on a research study which was carried out at a primary school in North-East England. A class of 19 five-seven year-olds engaged in 17 dialogic Community of Enquiry sessions (Haynes, 2002, Lipman, 2003) between October and May, and data were gathered to investigate the development of creative thinking in this setting. The study was informed by Socio-cultural Theory (Moran & John-Steiner, 2004) Mercer & Littleton, 2007), and Activity Theory (Engeström, 1999). Two types of analysis were carried out: one which was based on coding, using a Grounded Therory approach, and one which was based on Conversation Analysis (ten Have, 2007). Complex dialogic creativity processes were identified, and for most pupils there had been an important development in the number and type of creative comments, according to the criteria used in the study.

However, as Lefstein (2006) has argued, it is important to acknowledge the impact of power differentials in classroom dialogue, and relatively large power differences were apparent in many of the Community of Enquiry sessions. In this paper I will explore these in the following six themes from the study: Power; breaking boundaries; seeking recognition; conflict; transformation; and silence, and I will present these themes using a visual framework adapted from Engeström's model of expanded mediation (1999). Engeström's model originates in his work on Activity theory, and is thus not normally used to represent instances at micro-level, but I believe that it is a useful tool which can help us to identify processes related to power at macro, meso and micro level. As such, it can also play a role as an important assessment and metacognitive tool within Teacher Education. The paper aims to contribute to the on-going discussions about power at micro, meso and macro level within the Social Justice, Equity and Diversity RDC within ATEE, and to international educational research on a wider scale.

Knowledge, Power and Education for Equity

Monique Leijgraaf, Isolde de Groot, University of Humanistic Studies,
Netherlands

The commonly to Sir Francis Bacon attributed Latin aphorism 'scientia potentia est' (knowledge is power) can be interpreted in various ways. For instance, it can be understood as an expression implying that obtaining knowledge involves increasing power. Critical scholars emphasize that the phrase also implies that the ones constructing knowledge are in power, making official knowledge a reflection of mainstream, dominant and established views, truths and beliefs (Apple, 2014; Banks, 1993). Especially related to education, a third way to interpret this phrase underlines the power relations between students and teachers or teacher educators: the ones holding and transmitting knowledge (the teachers and teacher educators) are in power over the ones receiving knowledge (the students). Like the before mentioned option, this third alternative needs critical examination for it increases unequal and unjust educational practices.

Questions and considerations related to knowledge on the one hand and power relations between students and teacher educators on the other hand emerged from our series of small scaled, narrative researches as well. The empirical parts of our studies aimed to explore meanings both teacher educators and students gave to new approaches to teaching that strove to open up new possibilities for students by creating room for students to find their own routes. One of the dilemma's and difficul-

ties the participants experienced refers to this imbalance that might occur due to the transmission of knowledge, making teacher educators hesitant to lecture their students. Therefore, this theoretical paper, being a part of our entire research that aims to enrich both theoretical insights on education for equity and educational practice by building bridges between both stances, explores ways to overcome this experienced dilemma by presenting theoretical insights on education for equity, power relations, and knowledge.

First of all, we will present Paulo Freire's ideas on (and against) the banking concept of education, where teaching becomes an act of depositing, students are depositories and teachers the depositors, making the teacher and his knowledge the one in power over the students (Freire, 2000). Freire transforms this banking concept of education into joint praxis in which both teachers and students are involved in collective inquiry. Besides Freire, we will also present the work of Jacques Rancière who in a way shifts the attention from the power of the teacher and his or her knowledge to the teacher's assumption of (in) equality as the major (dis)incentive for emancipation and education for equity (Rancière, 1991). In our conclusion we will discuss the potential of Rancière's assumption of equality for the dilemma's our research participants experienced.

Controversial issues in multicultural secondary classroom discussions

Dubravka Knezic, University of Applied Sciences, Amsterdam, Netherlands

This study is part of a two-year research project regarding discussion of controversial issues in multicultural secondary classroom. The aim of the study was to develop lesson plans and strategies to help teachers prepare and lead classroom discussions in order to foster knowledge, attitudes and skills for democratic citizenship. Controversial issues cause heated emotionally engaged discussions because they touch upon cardinal moral values directly relating to students' personal identities. As such, we argue, they form unique opportunities for teachers to teach and foster democratic citizenship among students. Many teachers claim to have regular discussions with their

students, but in effect only teach them how to formulate their opinion without having deep discussions (Avery, Levy, & Simmons, 2013). Deeply engaging discussions share the characteristics with what Michaels, O'Connor and Resnik (2008) term 'accountable talk'. They increase the knowledge, actuate learning from each other through perspective taking and develop critical thinking and language skills, which enhance communication between different perspectives and opinions. Anderson, Chapin and O'Connor (2011) developed productive talk moves for teachers to help students develop skills and attitudes through formulating their own opinion, listening and

responding to their peers, and deepening their reasoning about issues relevant to democratic citizenship. The research question of this study was: what lesson materials help teachers lead discussions on controversial issues in order to foster democratic citizenship among their students?

Participants included eleven teachers from four different inner-city multicultural secondary schools and their students. Lessons and strategies were developed in collaboration with three of the eleven teachers. The collected data consisted of videoed lessons (N= 44), lesson observations, lesson evaluations by teachers and by students, and interviews with the teachers and students. Results showed that teachers differed greatly in their ability to discuss controversial issues with their students. This became apparent in observations and interviews. Only a few seized the opportunity to deepen the discussion through asking follow-up questions. Furthermore, from the observations and interviews with teachers, it also became apparent that the lessons and strategies helped the teachers in preparing and leading classroom dialogues. This study adds to the current discussion on controversial issues in multicultural secondary classrooms. Lessons and teaching strategies were developed to aid teachers in leading classroom discussions

Developing intergroup empathy in a study group of Israeli Jewish and Arab in-service teachers

Olzan Goldstein, Kaye Academic College of Education, Israel

The presentation describes the process of socialization in a multicultural group of Israeli Jewish and Arab in-service teachers who studied in a Master's degree program in Kaye College of Education in Israel, which is located fairly near the border of Gaza. The program emphasizes collaboration and communication in our globalized and multicultural society as one of the important 21st century skills. It includes visits to Jewish and Arab schools, collaborative learning in multicultural groups, and social events devoted to familiarizing the in-service teachers with the different cultures. At times, the Israeli-Arab conflict complicated intercultural relations in the group. The research examined the group discourse during two semesters, the second of which coincided with a period of conflict escalation between Israel and Gaza. Due to rocket attacks from Gaza, all the studies were transferred to distance online learning. The Israeli-Arab conflict causes isolation between Jews and Arabs. Alienation between groups and especially groups that are in conflict prevents dialogue and understanding between people (Gleizer, 2015). The absence of dialogue between people reinforces stereotypes and thus increases the feeling of rejection and hatred. Close communication and shared goals, however, support the development of human relations between people. Allport's (1954) intergroup contact theory describes five conditions for developing intergroup empathy: equal status; common goals; intergroup cooperation; support of authorities, law or customs; and personal interaction.

The research is based on a discourse analysis of the WhatsApp group conversation of the in-service teachers (11 Jews and 12 Arabs). The corpus of 7576 Hebrew messages during the first two semesters of the study was chosen for content analysisThe analysis of the messages revealed three types of discourse: learning (focused on content and organizational issues), social-emotional (focused on in-group relations), and reaction to external events. Following the intensive interactions in the first semester, the group was socialized and developed intergroup empathy. During the period of tension, both Jews and Arabs continued to converse: they condemned violence, shared their fears of rocket attacks, and cared and supported each other emotionally.

The process can be understood in light of the Allport's five conditions for developing intergroup empathy. The students in both groups are experienced in-service teachers, all having the same goal to succeed in their Master's degree program. They studied collaboratively and participated in learning and social events that were intentionally planned to fit the vision of the program. They frequently interacted face-to-face as well as online. Due to globalization and migration, the population of many countries has become multicultural. These findings can promote understanding of the process which connects people in a multicultural society.

Teacher education for all: An analysis of teacher training for inclusive practice for pupils with vision impairments

Kubra Akbayrak, University of Birmingham, United Kingdom

The literature widely acknowledges that pupils with vision impairments (VI) might have some distinctive/unique needs that might create some 'barriers' while participating in education, including learning through braille, using assistive tools to access visual information and moving safely and independently in the school (Douglas et al. 2009; McLinden et al. 2017). In order to reduce potential barriers that faced by pupils with VI, teachers have been provided with a specific training in the area of VI in many countries, including in Turkey and England. However, in parallel with increasing inclusive practice for pupils with VI, the role of teachers who have special training in the area of VI (i.e. VI specialist teachers) has dramatically changed in recent years. This study, therefore, aims to provide a holistic perspective towards teacher training approaches for preparing teachers to improve inclusive practices for pupils with VI in Turkey and England. Within the scope of the study, semi-structured interviews have been conducted with 17 VI specialist teachers in Turkey [Special Education Teachers] and 13 VI specialist teachers in England [Qualified Teachers of Children and Young People with VI] in order to investigate their perceptions towards their training in terms of providing inclusive practices.

As this study is a part of an ongoing PhD research, the qualitative data through semi-structured interviews will be analysed through using Bronfenbrenner's ecological systems theory as a theoretical framework (Bronfenbrenner, 1979) in order to provide a holistic view regarding teacher training for VI specialist teachers in Turkey and England. However, the initial findings illustrate that VI specialist teachers working in special school settings have different understanding regarding their roles in relation to promoting independence for pupils with vision impairments compared to VI specialist teachers working in mainstream settings. The initial findings also imply that those teachers have different perception about their training in terms of providing inclusive practice for pupils with VI in Turkey and England. With the completion of the analysis of the study, it is hoped that the findings will provide an insight into teacher training contexts of both countries for increasing inclusive practices for pupils with VI

Alternative Active Citizenship

D. R. Sträng, Østfold University College, Norway

The aim of my presentation is to introduce a current participatory research project on citizenship education, with the aims of supporting students to become active, informed and responsible citizens, willing to take responsibility for themselves and for their communities at the local, regional, national and international level. Fundamental for the project is to examine the content of active citizenship education in order to find a mutual understanding of the topic in Finland, Island, Lithuania and Norway. As an empirical basis, we use results from previous Eurydice reports. Due to increasing European challenges of socio-economic problems, political extremism and a lack of confidence in democratic processes, citizenship education has become key topic in the educations systems of many countries. The purpose of citizenship education is to provide the young generation with the knowledge and information they need to enter adulthood as active citizens who take responsibility both for their own situation and for their community. Active citizenship also includes the will and the ability for young people to participate in and influence the political process on various issues (European Commission/EACEA/Eurydice, 2017). Except from learning relevant topics in the classroom, citizenship education involves practical experiences gained through activities in the wider society. Training and support of teachers and principals is important for an efficient and well-functioning implementation process. To understand the socio-political discourse in the environment requires knowledge about how use different perspectives to interpret and understand the multitude of voices within and outside the current theme. Active citizenship education for young people will increase the societal transformation and the skills to advocate their own perspectives and influence wider social meanings (Finet, 2001).

The understanding of what are the right competences varies between countries and across time and space. Factors making citizenship education a fluid concept are different political constitutions and the degrees of economic wealth, socio-political stability, national context and international relations. Empirical research has shown that different European countries emphasise different aspects of citizenship through education. Previous Eurydice reports (European Commission/EACEA/Eurydice, 2012) states that citizenship education in Europe is characterized by different educational systems, each with its own structures, means, priorities and methods. In the absence of an overall European perspective, active citizenship education is from overlapping perspectives of structural factors, such as organisation of the education system, values, aims and funding, as well as contextual conditions and global trends.

Creative Thinking and Power in a Community of Enquiry

Hanneke Jones, Newcastle University, UK

This paper is based on a research study which was carried out at a primary school in North-East England. A class of 19 five-seven year-olds engaged in 17 dialogic Community of Enquiry sessions (Haynes, 2002, Lipman, 2003) between October and May, and data were gathered to investigate the development of creative thinking in this setting. The study was informed by Socio-cultural Theory (Moran & John-Steiner, 2004) Mercer & Littleton, 2007), and Activity Theory (Engeström, 1999). Two types of analysis were carried out: one which was based on coding, using a Grounded Therory approach, and one which was based on Conversation Analysis (ten Have, 2007). Complex dialogic creativity processes were identified, and for most pupils there had been an important development in the number and type of creative comments, according to the criteria used in the study.

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Engeström's model originates in his work on Activity theory, and is thus not normally used to represent instances at micro-level, but I believe that it is a useful tool which can help us to identify processes related to power at macro, meso and micro level. As such, it can also play a role as an important assessment and metacognitive tool within Teacher Education.

The paper aims to contribute to the on-going discussions about power at micro, meso and macro level within the Social Justice, Equity and Diversity RDC within ATEE, and to international educational research on a wider scale.

Teacher Learning and Leadership: Successful Leadership Practices for Schools in Challenging Urban Contexts

Joanna Madalinska-Michalak, University of Warsaw, Polen

The urgent need to understand the past for building tomorrow with new approaches in education puts important question in focus regarding social inclusion and the role of teacher learning and leadership as one of the most important issue. The purpose of this paper is to examine some of the key aspects of successful leadership practices for schools in socially disadvantaged areas and to critically consider the broader socio-cultural-economic context in which the school and the headteacher's work are immersed. The operation of schools in areas, in which the majority of pupils come from marginalised environments or are members of disadvantaged groups, is an area of educational research that deserves more investment and attention. There is a high risk that pupils in such schools may fail to achieve their full potential, which in turn may produce negative impact on their professional and personal lives into the future. Therefore, it seems crucial to study aspects of school leadership that may improve this situation.The presented research is guided by the assumption that teachers should be put at the centre of creating, developing, organizing, implementing, and sharing their own ideas for school change rather than being passive recipients of knowledge from the outside (Leberman, Campbell, Yashkina, 2017). The paper argues that there is tremendous potential for the good of students and the professionalization of teaching, especially when teachers work collaboratively to develop their own and their colleagues' professional knowledge and practices and are supported by school principal, school leaders and system leaders.The paper draws on research project on successful leadership in challenging contexts in Poland. Research has been based on the qualitative approach with the usage of collective case studies methodologies.

The data collected during interviews with teachers and school principals demonstrates successful leadership practices for schools in challenging urban contexts. Data analysis and interpretation show how teachers' professional development built around collaboration, teacher leadership, curriculum development, technology and pedagogy can be organized in a way that redistributes control and responsibility to teachers, thereby instilling a genuine sense of pride and accomplishment in their work. This analysis is significant in that it reflects on teacher learning and leadership at the country-specific findings as well as it can contribute to thought-provoking discussion on the issue of successful leadership, educational change and the professional development of, by and for teachers as individuals and, importantly, as a collective. The paper can make major contributions to research on school leadership in the context of social justice and sustainable development. The paper will contribute to the discourse on education that has a responsibility to foster skills, attitudes and behaviours that can lead to sustainability and inclusive growth and in this way, it can be linked to the 43rd ATEE Annual Conference theme: "A future for All – teaching for a sustainable society".

Alternative Active Citizenship

Dan Roger Sträng, Østfold University College, Norway

The aim of my presentation is to introduce a current participatory research project on citizenship education, with the aims of supporting students to become active, informed and responsible citizens, willing to take responsibility for themselves and for their communities at the local, regional, national and international level. Fundamental for the project is to examine the content of active citizenship education in order to find a mutual understanding of the topic in Finland, Island, Lithuania and Norway. As an empirical basis, we use results from previous Eurydice reports. Due to increasing European challenges of socio-economic problems, political extremism and a lack of confidence in democratic processes, citizenship education has become key topic in the educations systems of many countries. The purpose of citizenship education is to provide the young generation with the knowledge and information they need to enter adulthood as active citizens who take responsibility both for their own situation and for their community. Active citizenship also includes the will and the ability for young people to participate in and influence the political process on various issues (European Commission/EACEA/Eurydice, 2017). Except from learning relevant topics in the classroom, citizenship education involves practical experiences gained through activities in the wider society. Training and support of teachers and principals is impor-

tant for an efficient and well-functioning implementation process. To understand the socio-political discourse in the environment requires knowledge about how use different perspectives to interpret and understand the multitude of voices within and outside the current theme. Active citizenship education for young people will increase the societal transformation and the skills to advocate their own perspectives and influence wider social meanings (Finet, 2001).

The understanding of what are the right competences varies between countries and across time and space. Factors making citizenship education a fluid concept are different political constitutions and the degrees of economic wealth, socio-political stability, national context and international relations. Empirical research has shown that different European countries emphasise different aspects of citizenship through education. Previous Eurydice reports (European Commission/EACEA/Eurydice, 2012) states that citizenship education in Europe is characterized by different educational systems, each with its own structures, means, priorities and methods. In the absence of an overall European perspective, active citizenship education is from overlapping perspectives of structural factors, such as organisation of the education system, values, aims and funding, as well as contextual conditions and global trends.

Empowering Inclusive Teachers for Today and Tomorrow (EiTTT): Learning from an Erasmus+ Project

Anne Ryan & Deidre Murphy, Marino Institute of Education, Ireland

The promotion of inclusive education is a key element of current EU education policy. However, as our cross-sectoral project team of experienced teachers and teacher educators recognises, the implementation of this policy in practice presents a considerable challenge to many teachers. Even the most committed and capable of beginning teachers may feel frustrated at trying to employ inclusive strategies in increasingly more diverse and complex classroom contexts. These difficulties may negatively impact teacher attitudes, so that from the outset a vicious cycle becomes established whereby relatively ineffective coping 'strategies' become embedded as acceptable classroom

practice. The potential to develop on an ongoing basis the skills, attitudes and behaviours appropriate to inclusion and sustainable learning may consequently be lost.

Over a three-year period to 2019 the EiTTT project team of partners from various European countries has been funded to investigate and share learning about inclusive education practices that work and are sustainable in schools and teacher education institutions. We aspire to seeing the development of mainstream schools as inclusive learning environments for all learners including those with special needs and disabilities, those from socio-economically disadvantaged backgrounds and persons with

a migrant background. We illustrate our findings on the four activities we have explored to date:

Co-teaching in Teacher Education (University College Leuven-Limburg [UCLL] Belgium)

Student teachers are introduced to co-teaching concepts and practices. Mainstream teachers who frequently host UCLL student teachers for school practice report that co-teaching with the host teacher provides for significantly better learning for student teachers and their pupils.

Co-teaching for Inclusive Classroom Practice (Lukkari School, Nurmijarvi, Finland)

A successful model of co-teaching is employed whereby a mainstream teacher and special education teacher together with a classroom assistant work on a full-time basis in many mainstream classes. There are approximately 24 children in each class, 7 - 10 of whom have special educational needs. The practice can offer much potential for advancing the learning of all children in these classes as the shared expertise of different practitioners can make inclusive education realisable.

Video Interaction Guidance in Teacher Education (Karel de Grote University College, Antwerp, Belgium)

The need for appropriate personal dispositions in teachers is now more critical than ever, given the diverse population of students in mainstream classrooms. We illustrate how student teachers can employ video to enable better self-reflection on their engagements with students. 'Pedagogical Sensitivity' (care, empathy and responsiveness) is fundamental in supporting the learning needs of all students and not least those experiencing difficulties.

Student teacher Placement in a Special Education School Context – Developing Knowledge, Skills and Attitudes for Inclusive Practice (Marino Institute of Education, Dublin, Ireland)

In addition to Inclusive Education course work, student teachers undertake a placement in a special education setting. The experience is invariably described by students as one of the most valuable learning opportunities of their teacher education course. It affords them a heightened appreciation of the knowledge, skills and attitudes required to work more inclusively with all children in a mainstream school setting.

What Can Teacher Educators and Prospective Teachers Learn from an Analysis of Expressions of Emotions?

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In this paper, I present the main findings from a research project focusing on the analysis of facial and discursive expression of emotions among educators. Specifically, through a re-viewing of videos of teaching, teachers reflect on their perceived emotions throughout a lesson. One of the most critical areas in teacher education is identifying aspects of emotional awareness in preservice and in-service teachers and support elements that can be associated with emotional awareness. In this regard, among important qualities related to emotional awareness are: individuals' self-awareness, self-regulation, motivation, empathy, and sustaining social relationships (Goleman, 1995). The conceptualization of emotions in this study, therefore, acknowledges emotions within dynamic complex emergences, not as isolated psychological constructs. The literature on emotions in education and teacher education often focuses on distinct psychological constructs and relies on survey designs (Pekrun, Goetz, Frenzel, Barchfeld, & Perry, 2011; Bekerman & Zembylas, 2018). While there is a considerable body of literature on various survey patterns on emotions in teacher education settings, there is limited research on how specific cases of foreign language teachers expressing emotions within naturalistic designs (Linnenbrink, 2006).

In this study, I utilized on a mixed-methods design. Data were collected from a cohort (n=12) of prospective English language teachers who were about to complete their practice teaching program in Central Turkey. Four focal cases were selected. Each participant video-recorded a lesson they taught. At the next stage, each participant re-viewed the session on a computer screen and spoke with a focus on reflecting on their emotions during that lesson. The participants' facial expressions were video-recorded throughout this re-viewing session. The video data from the four cases were then systematically analyzed utilizing the FaceReader analytical tool. In the analysis, the set-up involved 15 frames per second. Overall, 117000 frames were analyzed with descriptive statistics and the facial expression of emotions were coded. The audio data were processed with interpretive analysis.

Table 1 summarizes the emotional states observed during the video sessions. The descriptive statistics do not show the frame by frame analysis. Rather, they represent the emotional patterns throughout the lesson based on identification of patterns at regular intervals.

Pedagogical entrepreneurship in teacher education

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How can pedagogical entrepreneurship in teacher education programmes contribute to teacher student´s practice?

Teacher education programmes need to include and model pedagogical entrepreneurship at both theoretical and practical levels, and entrepreneurial, practical activities should be operationalized in the teacher student´s practice periods in compulsory schooling (Haara, Jenssen, Fossøy & Røe Ødegård 2016).

Entrepreneurship in school is connected to socialisation and learning, towards a focus on learners motivation and meaningfullness (Lackéus, 2015, Røe Ødegård, 2014). Social cognitive learning theory claims that self-efficacy is the key to motivation (Bandura 2010). High self-efficacy is influenced by context and previous learning, and can influence behavior, mindset and motivation, which in turn contributes to a greater endurance and intensity in the face of new challenges (ibid.).

The learning processes in pedagogical entrepreneurship are based on sociocultural learning theories, inspired by Vygotsky, Bruner and Dewey, including cooperation,

activity, multidisciplinary learning and co-determination (Røe Ødegård 2014). Knowledge production is seen as a continuous construction and reconstruction process in which the individual is involved (ibid.).

The empirical basis is analysis of the teacher student´s reflection logs in groups. Log writing is a way of documentation that opens up for rich details and allows for referring to theory. Log is a structured method for sorting and processing experiences and lessons learned (Tveiten 2008). Group logs can be compared with focus group interviews, where the log writers must communicate with each other before they write. Furthermore, the log writers must relate to each other's opinions, and the log thus becomes a collective product (Dæhlen, Smette & Strandbu, 2011).

Preliminary findings suggest that pedagogical entrepreneurship has given the teacher students experiences with different ways of teaching in new contexts and in collaboration with fellow students and local partners. It has also an impact on the teacher student's motivation and self-believe. The teacher students' self-efficacy is expressed through enhanced belief in class management, and in a broader knowledge of the the teacher role through cooperative learning.

We believe our research will be a contribution to the discussion of lifelong learning, and why pedagogical entrepreneurship in teacher education should be emphasised with the aims of schooling. Emphasis on pedagogical entrepreneurship, teacher education and teacher students learning in practice is important to make progress on these matters.

Theory and practice in synergy – a practice-oriented thesis in teacher education

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In teacher training programs as well as in other programs in Sweden, students will carry out one or two "small thesis". There are no guidelines or recommendations in the Higher Education Ordinance regarding Bachelor's or Master's thesis. Teacher education is a vocational education and although the professional orientation is emphasized in other contexts, an academic focus on the "small thesis" has been dominating (Meeus, Van Looy, & Libottom, 2004). The predominant model is the form of a "small dissertation", structured according to a social science-humanistic tradition. At two universities, we have introduced a different model which we call a practice-oriented thesis. The students create a product, for example a textbook, a set of lessons in a particular school subject or a web based teaching media. They also write a report including an overview over the research field, their work process and an evaluation of the product. One way of thinking about sustainability in teacher education could be to provide students with a possibility to do development work, which then can be used and further developed within their future professional role. The aim of the study is to investigate how practice-oriented thesis contributes to students achieving the objectives in System of Qualifications and preparing them for their professional occupation. We identified all practice-oriented theses carried out from spring 2014 to spring 2016 in pre-school

and primary teacher education at one Swedish university, a total of 72. Eight of these theses were randomized selected. First we reviewed the product and the written report together with System of Qualifications objectives for the two programs. Then we used Råde's (2016) analysis models for further categorizations to identify the degree of professional and academic relevance in the theses. We also interviewed four university teachers who have several years of experience as supervisors and/or examiners.

The results from the study show that over two-thirds of the degree objectives are met in some way in the practice-oriented theses. In the majority of these the students demonstrate didactic awareness and they have developed their subject and subject education skills. Students apply a scientific approach and they show great creativity and innovative thinking, as the teachers also confirm in the interviews. The formulated aims demonstrate a genuine need that the product idea can fill. Something that can be insufficient in the practice-oriented theses is the students' abilities to theoretically analyse the results and the content of the product. Another problem is the university teachers' lack of experience to supervise and examine these type of theses, which leads to the fact that a lot of them are too extensive. In conclusion, we state that the practice-oriented thesis offers a scientific approach that is relevant to the future profession as a teacher.

The Impact of Physical Education in Content and Language Integrated Learning at a Secondary Japanese School

Minako Isomura, Ai Shiraishi, Hiroshima University, Japan

The world is becoming more globalized across a variety of fields. In Japan, one of the aims of global education is to develop human resources to be able to cope with globalization (MEST, 2011). One possible response is the educational approach known as Content and Language Integrated Learning (CLIL). This method of classroom instruction has become popular in Europe as it attempts to better meet the needs of learners and educators in a globalized environment. CLIL is a method of teaching and learning English that attaches a high degree of importance to both, the subject content and language learning. Physical education (PE) is often taught using a CLIL approach in the Western countries. Despite this recent increase, Fazio et al. (2015) point out that very little research has been conducted on PE using a CLIL framework. The aim of this study is to examine students' achievement and the practical strategies employed in the teaching of PE through CLIL using the 4Cs as the framework.

CLIL is based on the 4Cs framework (Coyle et al., 2010), which includes content, cognition, communication, and culture (community). In this study, the 4Cs are defined as a theoretical framework in a manner that is appropriate for a PE-in-CILL class and its students: "content" refers to the skills required in a PE class, "cognition" refers to the thinking processes that occur during physical activities, "communication" signifies the contraction in English and Japanese, and "community" refers to the students' ability to carry out tasks in a group.

The participants of this study were 40 Japanese junior high school students. The students demonstrated varying levels of English and exercise capacity. They attended PE classes in English nine times over the course of three weeks. Their instructor was a recently certified PE teacher who was fluent in English at a high, intermediate level. The unit covered during the nine lessons was apparatus gymnastics that also involved dance. The class content was composed of both closed skills and open skills. The research indicated the following two results. First, choosing the unit to be taught using the CLIL approach must be based on the type of skills required in PE. For instance, we engage in quick conversation with friends in open skills. On the contrary, we communicate using common words in closed skills. Second, out of the 4Cs, "community" appeared to be the most important, in that, the usage of English instruction for PE through CLIL differed among the groups. This finding acts as the base of this study.

Relevance to international educational research
From this study, would like to share the opinion about CLIL and the adoption of other methods of cross-curriculum learning.

Teachers Views on Emotions in Climate Change Education: Exploring Meta-Emotion Philosophies, promoting Critical Emotional Awareness

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Researchers have started to argue for the importance of including emotions in education for sustainable development (ESD). Two main arguments are used: (1) The seriousness of sustainability challenges such as climate change (CC) can evoke negative emotions and this needs to be taken account of in education to prevent feelings of hopelessness and promote hope and agency. (2) In utilizing diversity and taking account of different value-laden commitments, conflicts will inevitable occur and educators need to take account of emotions related to them to prevent deadlocks and to promote constructive learning. However, what's largely missing in the literature is an exploration of teachers' views on the role of emotions in ESD. In the present study the focus is on CC-education. The aim is to explore senior high-school teachers' meta-emotion philosophies regarding CC-education. What are teachers' views and feelings about students' emotions concerning CC and these emotions role in the learning process? What strategies do teachers use to handle students' emotions? The theoretical framework is meta-emotion philosophies, which is an organized set of emotions and thoughts regarding one's own feeling and other people's feelings. It's about awareness of emotions, acceptance of emotions, handling of emotions, and coaching of emotions. In an educational context meta-emotion philosophies are thought to have an indirect effect since they influence how teachers interact with students in emotional relevant situations, which can have an effect on how students cope with emotions and learn. Meta-emotion philosophies can also be related to the pedagogical concept of teachers' beliefs, which have been found to influence teachers' decision-making.

16 Swedish senior high-school teachers in geography, teaching about climate change, were interviewed. The methodological approach is phenomenological since it is the participants' subjective experiences and interpretations that is in focus. Stratified purposeful sampling was chosen to select the target group. Gender, age/experience, and teaching subjects besides geography (natural science/social science) were taken account of in the sampling process. Semi-structured interviews were performed. Data analysis was done by using interpretative phenomenological analysis (IPA). Preliminary analysis has identified four meta-emotion philosophies among the teachers: A disapproving or ignoring meta-emotion philosophy – the science oriented teachers. A dismissing/replacement meta-emotion philosophy – the therapy oriented teachers. A partially acceptance based meta-emotion philosophy – the politically oriented teachers. A complexity and acceptance based meta-emotion philosophy – the context sensitive teachers. The presentation will focus on how these four groups relate to and differ on the following dimensions: An awareness, or not, and acceptance, or not, of emotions. Beliefs and metaphors of emotions. Strategies to handle and coach emotions.

By pinpointing different meta-emotion philosophies this study can work as a starting point for lifting emotional dimensions in CC-education to the surface. It can be a base for critically discussing different views of emotions and thereby promoting critical emotional awareness as an important ESD-competence among teachers. Hence, the study has practical implications for teacher education.

Sharing Spaces and Common Concerns in a Health and sexuality Education Community

Isabel Chagas, Dulce Mourato, Marta Caseirito & Paula Costa, Universidade de Lisboa, Portugal

Since 2010 sexuality education has been compulsory in the Portuguese curriculum (grades 1 to 12) as part of schools Health Education projects. However teachers are still unprepared to deal with this topic and there are still many discrepancies among schools about how sexuality education is approached. Consequently teachers have been demanding updated training programs adequate to the curriculum demands.

In order to contribute to the solution of this situation researchers, educators, teachers, and graduate students members of a research group in a Portuguese university have designed and implemented formal and non-formal initiatives supported by digital technologies (DT) in special the tools provided by web 2.0. This group formed by Portuguese and Brazilian members has organised, since 2010, videoconferences, online conferences, a social network, and webinars directed to a wide range of participants from different countries and different professional venues. The main goal is to promote discussions, interactions and reflections about issues, theories and teaching practices in the fields of health education, sexuality education, and sustainable development.

The purpose of this communication is to tell the story about this group from the perspective of the Portuguese participants in order to describe and understand the impact of the initiatives in participant's views, attitudes and practices concerning the fields under study as well as in their personal development. How this international experience reflected in participants' present performance as educators and persons and how far the group members can go all together.

The narratives of four Portuguese members of the research group were analysed (Clandinin & Connelly, 2000). Six participants who regularly attended the initiatives were interviewed individually, and the transcripts were analysed. Websites of the initiatives were analysed to provide a chronological description of the group's realizations. Data from assessment questionnaires were also elicited.

The international experience enabled networks connections, sharing the same concerns and evidences in personal, scientific and professional perspectives about health, sexuality, gender, and sustainable development despite geographical dispersion, psychological motivations and cultural differences. It also provided a space for creativity stimulated by the multiple interactions and the collaborative work needed to organize, implement, and assess the initiatives. A shared sense of accomplishment is mentioned but also concerns were elicited specially about the sustainability of the group, the quality of the initiatives, the feedback from participants, and what to do next. Interpreting the group as a community of practice (Wenger-Trainer & Wenger-Trainer, 2015) provided a deeper understanding about its potentialities and limitations as well as new orientations regarding the future Results also enabled a critical reflection about the role and relevance of DT in creating different spaces for teacher preparation such as a social network with 750 members (informal space), an online international conference whose third edition was in 2015, a program of webinars dedicated to a wide range of issues with prestigious speakers that has been "on air" since 2013.

Learning innovations in health and physical integration education in Ukraine

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Fundamental changes in the educational system through its reformation are taking place in Ukraine today. The purpose of the reform is to stop the negative tendencies in the system (outdated didactics, low social status of the teacher, lack of motivation for personal and professional growth, etc.) and turn the Ukrainian school on the lever of social equality and cohesion, economic development and competitiveness ofUkraine. In addition, there is a rapid increase in volume of information that requires a quick update of content, forms, methods and means of education, extension of educational periods, the establishment of the principle of life long education, the comprehensive technology of the educational process [1]. If in the traditional study attention was focused on memorizing and reproduction of information, then in the new conditions there is a need for the development of the student's creative (productive) thinking, formation of his communicative skills and practical preparation for active life in an ever-changing social environment.

Such changes are guided by the concept of the New Ukrainian School. One of its directions is to introduce the integration education; in particular, we are talking about physical education (PE) and health education (HE). For the PE teacher important is the issue of preparation for the introduction of new forms of work, both at the PE lessons and on the HE lessons (in Ukraine this subjects are separate, teaching provides by different teachers [2], but in our researches we analyses the possibility to provide PE and HE by PE teachers).

The aim of our researches was to analyze the innovative forms and methods of work on PE and HE lessons in the world, to verify on practice the possibility and effectiveness to use such innovations in Ukrainian schools. An important moment in research was to find out attitude and readiness of PE teaches to implement innovational teaching in their practice. Innovational teaching we understand as introduction something new in aim, content, methods and form of education in organization of school activity of teacher. We also took into account that innovations are not only new ideas, approaches, technologies that weren't proposed and used previously, but the complex of elements or its separate elements of pedagogical process, that have a progressive beginning that enables them to effectively solve education and education problems during the change of conditions and situations.

To realize the aim of our research, we used the compare-pedagogical methods, observation and methods of sociological research. As a result of research we appointed the ways of implementation innovational teaching for realizing competence potential of PE and HE.

Contributions of the geography for the promotion of blind and low vision students' wellbeing in preparatory schools

Leia Andrade, University of Santa Catarina, Brazil, Teresa Vilaça, University of Minho, Portugal

Although wellbeing in children is of great public interest, individual or other resources have not been widely studied in order to understand how geographic space can promote wellbeing in the school context. In this research, factors that compose the space of students' cohabitation that can promote the wellbeing of blind and low vision children were analysed. The factors were conditioned in the reflection that for the reading of the geographic space are indispensable skills that must be developed in interaction in the school life, namely the construction of the notions of space and conceptual elaboration of the teaching of Geography. As wellbeing is a multidimensional construction constituted by emotional and cognitive components, it is related with the concept of "place" developed in geography classrooms. That is, it has been observed that the characteristics of "place" are related to the type of students' interpersonal relationships and the opportunities to develop their autonomy and be involved in processes of decision-making. For this, this research in Geography teaching with children highlighted the recognition of the capacity of symbolic production and the constitution of its manifestations and representations, it becomes necessary to affirm its importance as social actors in their cultures. The research action taken in a collaborative approach that provides the means to take systematic measures to solve problems, highlighted the elements of well-being and its applicability in the classroom in the discipline of History and Geography of Portugal. In total, four blind and low vision children were observed in their respective school groups during five months. Data were collected through observation, with the elaboration of class diaries. We acknowledge that well-being can be highlighted in this study as transversal, longitudinal and experimental, and also provide relevance in the formulation of teaching strategies associated with: healthy behaviors, social connection, inclusion and factors in the physical and social environment, measure, trace and promoting well-being can be useful to multiple actors involved. As there is no single determinant for individual well-being, we chose as aspects in this study: commitment to learning, perseverance, optimism, connection and happiness. The aspects were listed based on the pedagogical practices and student manifestations during the activities, so no measurement scales were assigned. The results show that the school geo space condition these students' wellbeing at the following levels that affect their lives: affectivity, relations of autonomy and independence in the spaces of the school, the exchanges between students, and the relations of belonging to the daily life of the school. As the aspects of happiness about the feeling of contentment with life, have been identified in the friendship of children, which is closely associated with well-being. Friendship relationships presented themselves as coping skills for children in the face of each other's difficulties. These findings suggest that the type of "place" conditions the wellbeing of blind and low vision students and influences the formation of their identity in the development of their self-esteem, self-respect and self-confidence.

Gender stereotypes and environmental concepts in Science textbooks

Teresa Vilaça, University of Minho, Portugal

Gender power relations, age, ethnicity, to be or not an individual with a disability and other variables, influence the impact of people on the environment and the impact of environmental degradation on people (OSCE, 2009; WHO, 2010). A Swedish study shows a gender gap in students' sustainability consciousness that increases throughout the age span and is amplified in ESD oriented schools (Olsson & Gericke, 2017). Textbooks include gender bias as a quite persistent and invisible obstacle to gender equality in education (Blumberg, 2007, 2015). In most of textbooks male individuals are much more presented (e.g. Parker et al., 2017) and show more active roles than females (Sovič, & Husa, 2015). Gender stereotypes are still expressed in textbooks representations regarding the type of physical activity (Martinez-Bello, & Molina-Garcia, 2016), the expression of emotions (Parker et al., 2017), occupational (Wu, & Liu, 2003) and domestic functions (Blumberg, 2007); ethnicity (Parker et al., 2017); age (Menescardi Royuela et al., 2017), and being a person with a disability (Parker et al., 2017). As environmental education is important for science courses in different countries, science textbooks need to deal with environmental issues (Sürmel, Yildirim, 2008; Aydogdu, & Idin, 2015).

Against this background, this study aims to analyze the occurrence in Portuguese science textbooks of gender stereotypes and environmental representations and, their interception with differences in age, ethnicity, individuals with disability and type of physical activity.

The five science textbooks of the 8th and 5th grades most chosen by Portuguese schools were examined for environmental and gender representations. All images of these textbooks in which the sex or gender of the individual was identified based on the physical indicators of sex or cultural indicators of gender, were included in the analysis. Repeated images were only coded once. The author coded all images and an additional coder coded a random sample of images. Relative frequencies of each category of analysis were used to evaluate the relationships between gender and other variables. After a descriptive statistic, the Chi-square test (χ^2) test was used to determine whether these relationships were statistically significantly different.

Results indicate that the majority of the textbooks analysed have a similar visual representation of men and women, contrary to the results found in the majority of previous European researches (e.g., Blumberg, 2007, 2015). White bodies are normative with a limited representation of people with other ethnicity or a physical disability as shown in other studies (e.g., Parker et al., 2017). All textbooks visually show both the man and woman in active roles. However, all books show almost exclusively male scientists. Environmental representations in these textbooks are under analysis. Therefore, teacher training should promote the critical analysis of the imbalance of images according to age, ethnicity and individuals with disability.

Representations of gender and environment in the 7th grade Science textbooks

Manuela Sousa, Teresa Vilaça , University of Minho, Portugal

The Swedish Society for Nature Conservation (2015) created a useful analytical framework to carry out a gender analysis of environmental work which includes the following categories: i) formal and informal constraints, namely rules and norms that shape the behaviour of actors in society, gender relations and identities; ii) division of labour, which means the tasks and responsibilities that men and women are expected to fulfil in private and public arenas; and iii) access to and control over resources, that is the resources, in a broad sense, that men and women have

access to and power to decide over.

Various researches on textbooks analysis show that male individuals are much more represented, are more active roles than females (Sovič, & Husa, 2015) and have different types of occupational and domestic functions (Wu, & Liu, 2003). As environmental education is important for science courses in different countries, science textbooks need to deal with environmental education issues (Sürmel, Yildirim, 2008; Aydogdu, & Idin, 2015). Therefore, the Portuguese legislation regarding the crite-

ria for assessing, selecting and adopting school textbooks states that, among other things, school textbooks should: "Promote education for citizenship, in particular by not discriminating on a cultural, ethnic, racial, religious and sexual basis and respecting the principle of gender equality" (Portugal, Circular nº. S-DGE/2015/1571, p. 4).

Against this background, this study aims to analyze the representations regarding gender and environment and, their interception with differences in age, ethnicity, individuals with disability and type of physical activity. Environment and gender representations were examined in the most selected 7th grade Science textbooks used in the current academic year in Portugal. All images of these textbooks in which the sex or gender of the individual was identified based on the physical indicators of sex (e.g., genitalia, breasts) or cultural indicators of gender (e.g., dress or hair), were included in the analysis. Repeat-ed images were only coded once. The author coded all images and an additional coder coded a random sample of images. The analysis included all pages of textbooks. Relative frequencies of each category of content analysis were used to evaluate the relationships between gender and other variables (e.g. health behaviours, occupational functions). After a descriptive statistic, the Chi-square test test was used to determine whether these relationships were statistically significantly different.

All the textbooks analysed represent approximately with the same frequency men and women, what is different of previous international researches analysed (Sovič, & Husa, 2015) and people without physical disabilities and Caucasian ethnicity and as shown in other studies (Martinez-Bello, & Molina-Garcia, 2016). Teachers should be trained to critically analyse the imbalance of images according to these categories.

Martial Arts exercise Effects on Primary School Students' Cognitive Abilities, Social Behaviors and Executive Functions

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The frontal cortex of the brain is a region associated with learning and performing of motor skills. The motor learning can be seen as a permanent change in the ability to perform a skill as a result of practice or experience. Such learning and performing of motor skills involve cortical and subcortical areas of the brain. This could be in alignment with known principles in neurosciences indicating "Use it or loss it" and "The neurons that fire together, wire together". Learning and performing motor skills helps to protect and maintain neurons as well as strengthens the connections and the brain's various abilities. The findings of studies have highlighted that exercises of martial arts can enhance children's learning and system consolidation. On the other hand, students in a large number of Iranian schools, sitting for long hours without moving much which can affect their learning. This study, accordingly, aims to examine the Martial Arts exercise effects on Primary School Students' Cognitive Abilities (memory and attention), Social Behaviors (self-confidence and contributing with others), and Executive Functions. The study is conducted by a quasi-experimental research design with a pre-test, post-test, and a control group. Two groups of primary school students in northeastern of Iran were selected to participate in the study. A group as an experimental group (n= 30) and another group as a control group (n= 30) are selected from primary school. The experimental group learned and exercised continually in martial arts (i.e. Taekwondo, Kung Fu, and Karate) for three months at least three sessions in a week. The participated students in the study are assessed in two phases, in three aspects i.e. cognitive abilities, social behaviors, and executive functions that addressed in the conducted test (WCST); namely cognitive flexibility, perseveration, the time needed for completing categories, and efforts needed for reaching the first category. The collected empirical data were analyzed quantitatively and qualitatively. Quantitatively, the findings of the study analyzed by co-variance method indicate a significant increase in primary school students' attention and positive social behaviors (self-confidence and social contribution behaviors). Further, it shows a significant decrease in students' number of errors in some of the WCST categories (executive functions), i.e. perseveration, the time needed for completing categories, and efforts needed for reaching the first category in the experimental group. It can be concluded that practicing the complex motor skills such as martial arts can lead to enhance student's cognitive, social, and executive functions. Consequently, this can promote students engagement in the learning process as well as their performance in cognitive, social, and executive functions. These kinds of researches could be alignment with educational neuroscience, as a new interdisciplinary domain.

Enhancing Sustainability through Climate Change Education: Observations from a Climate Change Awareness Study

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Climate change is a complex global problem and addressing it takes more than science alone (UNESCO 2010). As such the need for climate change education to enhance sustainable development has become so important. '**Education for sustainable development** is the process of equipping students with the knowledge and understanding, skills and attributes needed to work and live in a way that safeguards environmental, social and economic wellbeing, both in the present and for future generations (Brundtland Report 1987, UNWS 2005). Literature search indicates that very little has been done to investigate the level of teachers' climate change awareness especially in developing countries hence this study. The study thus, examined climate change awareness level in relation with its different attributes among secondary school teachers in Ebonyi State, Nigeria. This study is anchored on the "human forcing besides greenhouse gases theory" Bast, (2010). A survey design was adopted for the study. The study population was 4,719 teachers in all public schools in the three education zones of Ebonyi State. Using a multistage sampling procedure, sample size of 230 teachers was selected from those schools in two out of the three education zones of the state. Instrument for data collection was "Teachers Climate Change Awareness and Sources of Information Questionnaire (TCCASIQ)".

All questions on the instrument were grouped into six attributes based on their relatedness. Based on these groupings, level of awareness on each of the attributes was assessed. Reliability coefficient of the instrument was established at 0.90 after its validation. Data obtained were subjected to statistical analysis using the independent t-test. Based on the results it was observed that the level of climate change awareness among secondary school teachers in Ebonyi State is high. However gaps in their knowledge were revealed. The gaps were due to lack of in-depth knowledge on some climate change issues as it relates to different climate change attributes. This calls for an urgent attention. It is therefore recommended that (i) intensification of environmental education in schools for teachers and students, (ii) establishment of climate change awareness clubs in schools (iii) organization of capacity building programmes for teachers (iv) integration of climate change education into school curriculum through a curriculum review. This study has a practical usefulness to Ministries of Education, Curriculum planners, policy makers and researchers on the international educational research scene. It serves as an eye opener to them to provide more environmental education despite the awareness level of people in the different sectors of the society.

Turning Oil Engineers Into Teachers: Pre-Service Science Teachers' Attitudes Towards Climate Change

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This paper reports on the results of a study which examined Norwegian pre-service science teachers attitudes towards the issue of human-induced climate change (HICC), and the ways in which the pre-service teachers envision engaging these issues in their future teaching practice. Despite the scientific consensus on the issue of HICC, a surprisingly large proportion of people in western societies do not believe a global warming is human-induced. Public attitudes towards climate change in most western societies vary according to many factors, and tend to mirror traditional demographics for environmental concern in general. Furthermore, one can expect oil-dependent countries or regions to be more climate contrarian than others.

Between 2014 and today, 20 000 oil-related jobs were lost in the Norwegian oil industry. As a result of this, teacher education institutions on the Norwegian west coast, where most of the oil industry is situated, have experienced an influx of ex-oil engineers who wish to qualify as science teachers.

This study is based on a survey on students attending six teacher education institutions, all offering a one-year course for qualifying people with a university degree in natural science as science teachers. Preliminary analyses reveal that students from the west coast of Norway appear to hold more climate contrarian attitudes compared to students from other parts of Norway. Furthermore, these climate contrarian viewpoints are reflected in the students' thoughts on teaching enivironmental/climate issues. Results of a more detailed analysis on how the degree of association with the petroleum industry covaries with attitudes towards the issue of HICC and teaching of enivironmental issues will also be presented. This study indicates that regions with declining oil industry might experience an influx of teachers with climate contrarian views into schools. I will attempt to suggest ways in which teacher education might meet these challenges.

Professional Teachers: Understanding Today-Building Tomorrow through Incorporationing Sustainable Life Skills Training in the Curriculum

Elsa C. Price, Örebro University, Sweden

Researchers have started to argue for the importance of including emotions in education for sustainable development (ESD). Two main arguments are used: (1) The seriousness of sustainability challenges such as climate change (CC) can evoke negative emotions and this needs to be taken account of in education to prevent feelings of hopelessness and promote hope and agency. (2) In utilizing diversity and taking account of different value-laden commitments, conflicts will inevitable occur and educators need to take account of emotions related to them to prevent deadlocks and to promote constructive learning. However, what's largely missing in the literature is an exploration of teachers' views on the role of emotions in ESD. In the present study the focus is on CC-education.

The aim is to explore senior high-school teachers' meta-emotion philosophies regarding CC-education. What are teachers' views and feelings about students' emotions concerning CC and these emotions role in the learning process? What strategies do teachers use to handle students' emotions?

The theoretical framework is meta-emotion philosophies, which is an organized set of emotions and thoughts regarding one's own feeling and other people's feelings. It's about awareness of emotions, acceptance of emotions, handling of emotions, and coaching of emotions. In an educational context meta-emotion philosophies are thought to have an indirect effect since they influence how teachers interact with students in emotional relevant

situations, which can have an effect on how students cope with emotions and learn. Meta-emotion philosophies can also be related to the pedagogical concept of teachers' beliefs, which have been found to influence teachers' decision-making.

16 Swedish senior high-school teachers in geography, teaching about climate change, were interviewed. The methodological approach is phenomenological since it is the participants' subjective experiences and interpretations that is in focus. Stratified purposeful sampling was chosen to select the target group. Gender, age/experience, and teaching subjects besides geography (natural science/social science) were taken account of in the sampling process. Semi-structured interviews were performed. Data analysis was done by using interpretative phenomenological analysis (IPA). Preliminary analysis has identified four meta-emotion philosophies among the teachers: A disapproving or ignoring meta-emotion philosophy – the

science oriented teachers. A dismissing/replacement meta-emotion philosophy – the therapy oriented teachers. A partially acceptance based meta-emotion philosophy – the politically oriented teachers. A complexity and acceptance based meta-emotion philosophy – the context sensitive teachers. The presentation will focus on how these four groups relate to and differ on the following dimensions: An awareness, or not, and acceptance, or not, of emotions. Beliefs and metaphors of emotions. Strategies to handle and coach emotions. By pinpointing different meta-emotion philosophies this study can work as a starting point for lifting emotional dimensions in CC-education to the surface. It can be a base for critically discussing different views of emotions and thereby promoting critical emotional awareness as an important ESD-competence among teachers. Hence, the study has practical implications for teacher education.

Professional Learning Through Boundary Crossing

Mhairi Beaton, Leeds Beckett University, Sarah Cornelius, University of Aberdeen, UK

The need for effective ongoing professional learning opportunities for the teaching workforce is widely acknowledged. Across Europe, teachers face the challenge of the most diverse classrooms in our history. Reflecting the changing nature and increasing diversity of our society, classrooms include children and young people with special or additional educational needs, those from diverse cultural backgrounds, non-native language speakers, those disadvantaged by poverty, and those with lives disrupted by migration and family separations. Teachers are considered the most significant in-school factors influencing student achievement (Hattie, 2009). Teacher educators need opportunities to explore diversity and learn from unfamiliar contexts to support trainees. This paper explores the lived experiences of professional educators (classroom teachers and teacher educators) involved in transnational learning events during an Erasmus Plus programme, PROLEA, which was designed to explore practice in complex professional environments.

Five-day learning events were organised in six institutions in four European countries (Germany, Slovenia, Netherlands and Scotland). Each learning event focused on the work being done by the host institution, but there was a common focus on the use of reflection and portfolio as professional learning tools throughout all events. Participants kept learning diaries throughout each event and the final activity of the week allowed reflective shar-

ing of significant learning moments. In these reflective dialogues, there was no evidence of reluctance to engage in reflection and dialogue about practice noted by Davies, Howes and Farrell (2008). Instead, the learning weeks were notable for the intense dialogue and critical explorations of both local and international practices. Following each learning event, participants were invited to create a narrative recording the experience. No guidelines were given to participants as to how this might be recorded so that the participants had control over this aspect of the process. Some chose to write, some to draw and some to audio-record their experiences. Pantic's (2015) model for teacher agency for social justice was used to thematically analyse the resulting narratives; focusing on the core elements of sense of purpose, competence, autonomy and reflexivity.

Findings indicated that participants who held a deep commitment to remaining a learner, in the socio-cultural sense of learning throughout their professional career, were keen to participate in these learning events. This commitment seemed to lead to a pre-disposition to engage in boundary crossing actions that permitted them to think in novel ways about some of the challenges of educational practice within contemporary Europe. The paper looks at the different aspects of this pre-disposition and concludes with a consideration of how this might be achieved for the wider professional education community.

Caracteristics of teachers' collaborative learning - a case study in international perspective

Nora Rapos, Orsolya Kalman, Eotvos Lorand University, Hungary

The EFFECT project aims to develop a European Methodological Framework(MF) for facilitating collaborative learning of teachers, which can be used as a guideline for teachers, teacher educators, school leaders, policy-makers and other educational stakeholders. The national projects related to the program highlighted that - beside the common frames - it is necessary to understand the contextual caracteristics of the collaborative learning (national, local, etc) to be able to support it effectively. The aims of our research are: 1) The evaluation of the national pilot according to the EFFECT project theoretical framework. 2) The interpretation of the contextual

caracteristics in Hungary. Caena (2011) in her analysis considers teacher collaboration, professional learning comminities as unequivocal factor of professional development and teachers' effective learning. The different forms of teachers collaborative learning play a growing role even in European context (Bolam et al,2005; DuFour, Eaker, and Many 2010; Verbiest, 2011;). At the same time the fluctuant effectiveness of the international projects draws attention to the role of cultural caracteristics (Hofstede, 2013). It has become clear through the EFFECT program in Hungary that the international framework of collaborative learning (participative professionalism,

deep-level collaboration, equity, holistic learning) shows special patterns.

The research investigates the forming of 3 professional learning communities by the methodology of case study. There were interviews conducted with the coordinators of the pilots at the beginning and at the end of the process, questionnaires with the teachers in 3 different times (n=101) and we examined the use of online surface of the learning communities and the documents created during the learning period. The main aspects of our analysis are: interpretation of collaborative learning, the change in teachers' interpretation and experience of collaborative learning, and the exploration of the supporting and hindering factors of collaborative learning. As results of the research we identified the supporting and hindering factors of collaborative learning in the the Hungarian context.

Supporting elements; the parallel operation of different roles of facilitator; teachers involvement into different forms of collaboration in order to professional learning; task-oriented operation of online supporting system; specific feedback tools; more participants from one school; pilot-leaders' expertise in facilitating. Hindering elements; Lack of reflective culture −both self- and peer-reflection; Lack of time for informal professional conversations; The expectation of online feedback; The professional prestige of facilitators was an obstacle to the involvement; Teachers' lack of time; Different hosting attitudes of schools towards collaborative learning; Disadvantageous positions of participant teachers in school; The problems of infrastructural background in the institutions; time frame of the pilot is too narrow for the deep learning of teachers.

The understanding of local case studies in the field of teachers collaborative learning creates a strong foundation for planning the international project in more subtle aproach and more supporting to local caracteristics. These research results lead to form a more differentiated supporting system to collaborative learning.

Teachers' professional knowledge. A critical analysis of expectations and experiences when newly qualified teachers have their first year in school

Roald Jensen and Dag Sørmo, Østfold University College.

In this abstract, we would like to report from a research study at Østfold University College. The purpose of said study was to gain further knowledge about newly qualified teachers and their competence of development and adaption and how they can contribute to the schools, when they start their professional career as newly qualified primary school teachers. The study also seeks to establish whether the experiences of these teachers and the schools provide grounds for discussing changes or adjustments to the education and qualification of teachers at Østfold University College (St.meld 11 2008/09).

For the study, we have used a sample consisting of various employees in three schools. All the schools are training schools for qualifying teachers. The method used was qualitative interviews (Kvale & Brinkmann, 2015) with newly employed teachers and the school headmasters. Data was analyzed in open, axial and selective categories, in a constant-comparative method, according to Glaser & Strauss (1967). The study was founded on a theoretical framework that describe the organizational culture and the way new arrivals are incorporated (or socialized) into an organization, i.e. into the community of practice, e.g. In order to understand organizational culture in such a context, we relate the study to Schön (The Reflective Practitioner), Lave & Wenger (Community of Practice) and Biesta´s (2009) descriptions of different functions of education. Our findings indicate that the newly employed are faced with different expectations and that they contribute to changing practices in the schools to a limited extent. Further, we found that arrangements for supporting newly qualified teachers was poorly put into system, and that they had to find their own ways to achieve support in their everyday tasks when needed. We would like to present the expectations and experiences of the newly qualified teachers compared to the expectations and experiences of the mentors and the principals of the schools, related to Biesta´s descriptions of qualifying, socializing and subjectifying functions of education. During the presentation, we hope to encourage debate and an exchange of experiences that may serve as critical feedback to the study and contributions to a research article on this topic.

Acquiring the skills to support children with special needs Throughout service learning in preservice teacher education

Aiko Hirosawa, Masafumi Ohnishi, Miku sasahara, Shizuka Suzuki, Asami Oda, University of Fukui, Japan

Children with special needs constitute approximately 6.5% of the children in ordinary classrooms. Although teachers are expected to support these children, the limited number of teachers and their multiple arrays of school management duties cause difficulty. On the other hand, university students learning the art of teaching are also expected to possess a high-quality expertise in supporting these children immediately after qualifying. Accordingly, coordinated school-supported internship programs have been established for 20 years to support the children with special needs, to assist overworked teachers, and to forward such experiences to the university students. It is currently recognized as a practical teacher education program. Furthermore, similar internship programs are widespread throughout Japan(Sugimoto,2013). However, studies that employ a systematic procedure have not reported the kind of experience and learning achieved throughout these programs. Therefore, the present study was conducted to confirm the characteristics noted in the experience of university students.

It is a popular practice for university students to participate in empowering schools through service-learning in preservice teacher education (Jeffrey et al., 2001). Furthermore, field experience in a teacher education program is considered to be crucial for preparing future teachers (Kyndt et al., 2014). In addition, Tait and Purdie (2000) stressed on the importance of preservice teacher education for developing positive attitudes toward disability and inclusion. Campbell and Gilmore (2003) illustrated the value of combining information-based instruction with structured fieldwork experiences in changing attitudes toward inclusion. Thus, it is necessary to understand university students' experience and learning throughout service-learning in preservice teacher education by means of systematic analysis.

In this study, a qualitative analysis of written records on cases by university students was conducted to reveal the characteristics of their experiences in such cases. Initially, portions showing the attitudes of university students were extracted from written records of 21 cases, and initial codes were subscribed to these. Thereafter, subordinate categories were formed by synthesizing these initial codes. Lastly, dominant categories were developed through comparative classification of the subordinate categories. Four experts undertook this work and, subsequently, modified the categories as necessary through discussion.

The following six categories were developed in terms of supporters' attitudes: reflection of practice, commitment to activities, collaboration with teachers, affably observing a child's words and actions, careful management of activities, and being present like the supporters' normal self. Each category had several subordinate categories, which may be classified as concrete behavior for the children. For example, the subordinate category of ensuring the presence of a relaxed atmosphere and assisting the child to develop friendly relationships with the children belongs to the "careful management of activities" category.

Teachers are expected to be reflective practitioners (Schön,1983). Furthermore, a high-quality collaboration benefits teachers and students in schools (Ronfeldt et al., 2015). It is evident that supporting the children with special needs is essential in inclusive education. Thus, the experiences of reflection, collaboration, and support to children with special needs throughout this internship program contribute to developing the teaching profession.

Issues in professional learning: experiences in the PROLEA-project and beyond

Jaap van Lakerveld, Lakerveld, Brigita Žarkovič - Adlešič; Susanne Huber; Schildwacht, Rita M.M.C. ; Christiane Kos, PLATO. :Leiden University, Netherlands

 The members of the RDC on in-service learning wish to deliver a workshop, or rather a carousel kind of experience to those who are interested in continuing professional development and learning of teachers. The workshop will consist of a common introduction to all on professional development Development is an autonomous or self-regulated process, and at the same time an activity of those who wish to promote development among others, in our case teachers. The first part of the workshop will serve as a brief introduction into the carousel part in which the members of the RDC will each deliver one way to promote professional development. Jaap van Lakerveld will deliver a general introduction to professional development followed by a presentation by Brigita Zarkovic who will outline an approach to professional development. This approach is the a basic model behind a project named PROLEA. The RDC is currently involved in a project to promote professional learning of teachers in our changing society. Members of the project group will outline and discuss four elements in our approach are:What are the challenges of the complex context in which teachers currently have to operate and what do these complexities imply for their work and their own development (Jaap van Lakerveld); Portfolio as a means of creating a professional development record,

How to create your own portfolio scheme to help you reflect. (Christiane Kose); Video feedback to assist and support teachers in their professional actions and the enhancement of these actions (Rita Schildwacht); Changing professional identity through transnational professional learning (Mhairi Beaton); Teaching migrant classes and how to introduce the topic to teacher education (Susanne Huber). The contributions on each of these issues will be offered parallel and two times in a row. Participants may take part in two activities they select. In the end, we will engage them into a dialogue among all participants to harvest and share the overall outcomes of the carousel experience.

Thus, we will disseminate our project experiences and connect to participants to acknowledge their inputs into our processes. Participants will be invited to contribute, and we as project members will do our best to contribute to what they wish to gain from the experience. This mutual dialogue serves as an example of how professional development may be a mutually beneficial experience that promotes professionalism among all concerned. The workshop will be rounded up by summarizing key element of the discussions in the subgroups and by linking the findings to our next project on professional development.

Continuing education of English teachers – putting theory into practice

Ingebjørg Mellegård, Østfold University College, Norway

This study investigates how professional development courses for English teachers contribute to developing their teaching practice. In Norway many teachers teach English without being formally qualified in the subject. Consequently, since the implementation of the latest school reform in 2006, teachers have been offered courses within a national programme of continuing education. Research identifies considerable potential for learning and development to take place in the interaction between practising teachers. This study aims at gaining insight

into teachers' learning and to what extent they put new methodology into practice.

The theoretical framework is mainly rooted in Postholm's theory on teachers' learning and professional development (2012). Furthermore, this study relies on Desimone's (2009) set of critical features for examining the effectiveness of professional development courses: content focus, active learning, coherence, duration and collective participation.

The participants in this qualitative study were in-ser-

vice teachers during their continuing education course in English. As part of their course work requirements, they were asked to write a reflection text by the end of their first semester where they described noticeable development in their own teaching practice. The data for the study consists of thirty-five texts written by primary school teachers; it's the practitioner's voice that speaks. This textual documentary material has been analyzed primarily from an inductive perspective, coded and categorised (Savin-Baden & Major, 2013).The present study reveals that the major factor of significant development pointed out by the teachers is using the target language more actively in communication with the pupils. This seems to mark a distinct shift for many teachers in their beliefs and understanding of what leads to effective language learning. The teachers report that the pupils respond to more language exposure by communicating more in English and less in their mother tongue. Furthermore, the data shows that new knowledge about vocabulary learning, in short, an insight into learning language in context and an understanding of collocations, leads to a change in the teachers' teaching practice and improved student learning outcomes.

In Norway, the educational authorities have drawn up guidelines, which explicitly call for continuing education courses to be classroom-orientated. Continuing education programmes must aim at creating an arena for linking theory and new knowledge to the classroom to provide teachers with the necessary tools to become more autonomous in their own professional development (Maugesten & Mellegård, 2015). This study should make a significant contribution to the design of such courses, both nationally and internationally.

Teachers' professional knowledge. A critical analysis of expectations and experiences when newly qualified teachers have their first year in school.

Roald Jensen and Dag Sørmo, Østfold University College, Norway

In this abstract, we would like to report from a research study at Østfold University College. The purpose of said study was to gain further knowledge about newly qualified teachers and their competence of development and adaption and how they can contribute to the schools, when they start their professional career as newly qualified primary school teachers. The study also seeks to establish whether the experiences of these teachers and the schools provide grounds for discussing changes or adjustments to the education and qualification of teachers at Østfold University College (St.meld 11 2008/09). For the study, we used a sample consisting of various employees in three schools. All the schools are training schools for qualifying teachers. The method used was qualitative interviews (Kvale & Brinkmann, 2015) with newly employed teachers and the school headmasters. Data was analyzed in open, axial and selective categories, in a constant-comparative method, according to Glaser & Strauss (1967). The study is founded on a theoretical framework that describe the organizational culture and the way new arrivals are incorporated (or socialized) into an organization, i.e. into the community of practice, e.g. In order to understand organizational culture in such a context, we relate the study to Schön (The Reflective Practitioner), Lave & Wenger (Community of Practice) and Biesta´s (2009) descriptions of different functions of education.

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We would like to present the expectations and experiences of the newly qualified teachers compared to the expectations and experiences of the mentors and the principals of the schools, related to Biesta´s descriptions of qualifying, socializing and subjectifying functions of education. During the presentation, we hope to encourage debate and an exchange of experiences that may serve as critical feedback to the study and contributions to a research article on this topic.

The importance of metaphoric competence in second language acquisition

Sonia Blomquist, Uppsala University & University of Gavle, Sweden

The aim of this paper is to raise the importance of knowledge concerning metaphorical competence in second language teaching and learning. This subject area is also the focus of my ongoing dissertation project in didactics. Research on bilingualism has shown that when learning a new language several factors play a vital part, such as age, gender, intelligence, schooling, study experience, socioeconomic affiliation, parent's education, motivation and social and emotional situation (Ahlgren 2014: 101f.). In Sweden as well as in many other countries, second-language students often face the challenge of simultaneously learning a new language and acquiring new knowledge via this language that they do not yet really master. Most researchers agree that second language learning takes time. Understanding the communicative language (BICS) can take a couple of years under favorable conditions, while the more advanced school language (CALP) can take up to eight years or more to conquer (Löthagen, Lundenmark & Modigh, 2012:11). One particular challenge for second language learners is the use of figurative language, which affects learners ability to understand, interpret, process, and/or produce metaphors.

International empirical research has shown that integration of conceptual metaphors in language teaching has the potential to improve students' conceptual fluency as well as their productive and receptive language skills (Danesi 2008:223; Juchem-Grundmann 2009; Littlemore & Low 2006; Littlemore 2009). These results, however, have not had any significant impact on the teaching of Swedish as a second language in the Swedish school system. There seems to be a discrepancy between what we know (research) and what we do (teaching) and my goal with this presentation is to emphasize the importance of specific existing research that can improve the conditions of learners of Swedish as a second language.

Development of evaluation criteria of dance skills in Physical Education in Japan

Iseki Ayaka, Iwata Shotaro, Hamamoto Aiko, Hiroshima university, Japan

The aim of this study was primarily the following: 1) to review the researches relevant to dance in the field of physical education (P.E.) and 2) to develop evaluation criteria for dance skills in P.E. This is because most dance research papers have focused on "state of the art." However, in some countries, dance education has been included in P.E. Furthermore, research on evaluation criteria for dance skills have not been progressing in P.E. Thus, the overall objective of the study was to clarify the present status of research on dance in the field of P.E. and provide reliable and useful evaluation criteria for dance skills in P.E.

In particular, this study used the framework of Laban's (1974) theory for developing evaluation criteria for dance skills. Laban's analysis of movement provides a reliable and useful framework for thinking about movement in class. Stacey (2008) indicates that Laban divided all human motions into three basic exertions: weight, space, and time. Therefore, this study developed evaluation criteria for dance skills in P.E. based on Laban's three basic exertions.

This study's method included the following two processes. 1) To review the researches, the study relied on Johnson's (1970) constricted classifications for dance study. Johnson's study (1970) was a review of the social and behavioral science research covering the period from 1900-1968 relevant to dance education. Specifically, he expressed dance study's inclination using the following three aspects; a) independent variable parameters, b) subject parameters, and c) dependent variables. 2) To develop evaluation criteria, we investigated articles and books relative to dance study using Laban's theory, and summarized the findings based on the hierarchy of the three basic exertions for constructing dance skills evaluation criteria in P.E.

The results of this research can be summarized as follows. First, there were hardly any dance studies in P.E. and most of the dance studies were included as part of art. However, dance in terms of art and P.E. is different in content and emphasis. Murray (1968) states that "the study of human movement is fundamental to an understanding of dance and dance training, and dance is a powerful means of self-discovery and mastery." Thus, we should study dance education not only from the perspective of art, but also in terms of P.E. Second, this study used keywords such as: a) weight is "In and out of force," b) space is "Bending and stretching of the knee," and c) time is "Timing of breathing." Therefore, this study constructed dance skills evaluation criteria in P.E. based on three keywords.

From Line to Loop

Máire Nic and Bhaird, Laoise Ní Chléirigh; Maynooth University, Ireland

AgroCycle is a Horizon 2020 funded research and innovation project addressing the recycling and valorisation of waste from the agri-food sector. The AgroCycle protocol is to deliver a blueprint for achieving sustainable agri-food waste valorisation addressing the European policy target of reducing food waste by 50% by 2030 while also, contributing to the wave of change that is occurring in China in relation to sustainability. AgroCycle has identified the relevance of children as global citizens, and as stakeholders in the circular economy conversation and is dedicating a section within their online platform to them, entitled AgroCycle Kids. This is a child centred online resource focusing on translating the scientific concepts of the circular economy from the AgroCycle content into accessible language for use in the primary school curriculum. AgroCycle Kids is inviting child participants to look at the world in which they live through a critical lens. This is current and vital, as experts globally grapple with the necessity of waste valorisation. However, to leave this conversation in the hands of adult citizens alone would be futile. Children are change makers, influencers and they too are guardians of the planet which is merely on loan to all of us.

This paper will highlight the importance of deliberative democracy in the primary school education system, while exploring the action research conducted in 3 primary schools in Ireland in order to illustrate for the audience how the content for AgroCycle Kids was developed. The researchers will show the impact of the dissemination of the AgroCycle content by the children within their peer groups and families and how their mindset changed over the course of the bespoke AgroCycle Kids programme. The research was conducted using an arts based narrative, which will be demonstrated to the audience. The AgroCycle mission to reduce agri-waste and move from a linear to a circular economy was shared with youth for the first time in the Irish education system. This research in schools is underpinned by the Froebelian philosophy which emphasises the connectedness between living and non-living things and examines the relationship of humankind to nature. This resonates deeply with the circular economy concept. Although beginning with agri-waste, the research has sparked dialogue around broad waste valorisation and minimisation in many systems. It crossed over into areas in the children's lives, from agri-waste to domestic food waste, to rethinking how we look at 'waste' in general. The action research conducted in schools therefore, has cultivated innovation and creativity skills in the children and their teachers, and culminated in an opportunity for the children to design for sustainability. This paper will provide a vignette into the niche approach of AgroCycle's novel inclusion of our youngest global citizens in a necessary move towards a circular economy.

Primary school pupils' views of teaching and being a teacher

Ana Forte, Agrupamento de Escolas D. Maria II, Portugal, Maria Assunção Flores, University of Minho, Portugal

Pupil voice has been used widely in educational literature and it is generally applied to strategies in which pupils are invited to discuss their views on school matters. Pupils' views are relevant to better understand and improve teaching and learning as they are seen as authentic sources in so far as they personally experience the classrooms firsthand. In this paper we present data arising from ongoing research on primary school pupils' views of teaching and being a teacher in Portugal. Data presented in this paper draws on two research questions: i) How do pupils describe their learning experiences in the classroom? ii) Do they want to become teachers in the future? Why? Why not? Data were collected in 13 primary schools within a cluster of schools. In total, 440 out of 468 pupils participated in the study. Ethical issues were taken into account. Permission to collect data with the pupils were obtained from the Ministry of Education, from the cluster of schools' head teacher, from the parents and from the pupils themselves. Out of the 440 pupils, 194 were female and 246 male. Their age ranged from 8 to 11 years old. Pupils were enrolled in year 3 and 4 of primary school (in Portugal primary school includes 4 years of schooling). Findings suggest that pupils learn better when they have tutorials with the teacher (individualised teaching) and where there is silence in the classroom. Pupils also identify the importance of motivation and focus when they learn. When asked if they would like to become teachers in their future, most of them said no (329). They stress that teaching is hard work with a low salary. They also refer to pupils' misbehaviour. In total 111 pupils claim that they would like to become teachers because they enjoy teaching, they want to help pupils and because they want to be like the teachers they admire. Findings have implications for reflecting on the ways in which pupils and teachers interact as well as on parents' views of the role of the teachers. These and other issues will be discussed further in the paper.

Transforming formal decision to leading practice, values, and policy: Preparing teacher educators to equip future teachers to confront with contradictories in a complex society

Michal Golan, The MOFET Institute, Israel

Israel is known to be a most complex society. It is both a continuum immigration country and multi-cultural state comprising minorities from different origins. The tensions deriving from real life penetrate into the educational systems and educators find it hard to cope with this complexity. They complain that despite their readiness to do that they have no knowledge base neither skills and moral support to face the challenge (Halperin, e., 2014) ; (Epstein, D., 1993). Researches dealing with the issue of conflict resolution are constantly growing due to vast immigration and the growing scope of refugee phenomena worldwide (Nave, 2017). The MOFET Institute is a national intercollegiate center for the research and program development in teacher education. The term "inter-collegial" stands for the fact that albeit the local reality in which both teacher education and educational systems are sectorial, MOFET has them all under its umbrella. At the time the Ministry of Education could not afford the establishment of several centers and thus financial constrains were translated to leading values and daily practices and only lately, due to growing need we turn it into manifested policy.

The infrastructure is already there. Throughout the years the institute had built mixed communities of writers, researchers, learners, artists and others. They all work together within mixed groups and one can say that values were not only declared but also lived (Darom, 1984). Fascinating processes grew in our garden and it helped pass very explosive times.

Throughout the years more focused actions were adopted and the institute diverted special attention to these issues. Lately, due to rise of extreme atmosphere in the country, we decided that the institute should take a more active stand and initiate the establishment of a center dedicated to the issue of "living together", meaning learning to deal with controversies and conflicts in a professional way (Nave, 2017). We opened courses, invited writers and expert and joined other organizations who are willing to join this long and winding journey. The new stage in the institutional policy leads us to take actions in two different directions: Recognition of the specific needs of each different group/sect and readiness to response to it (regardless our original policy of working within mixed communities). Recognition of the urgency/commitment to take proactive steps, to initiate focused actions and respond to evoking dangerous winds: equip teacher educators with educational knowledge and skill needed deal with conflicts as a leverage to live in a democratic country. The poster will present the development of the institution from practice to manifested policy. It's theoretical background derives mainly from the relatively young field of conflict resolution.

How do Physical Education Student Teachers Develop Knowledge during Teaching Practice in Japan? : Focus on reflection of PCK in case conference

Aiko Hamamoto, Shotaro Iwata, Hiroshima University, Japan
Ayaka Iseki, Yasuda Woman University Junior College, Japan

This study examines the characteristics of student teacher's knowledge and how it can lead to students' growth. Knowledge has gained prominence as one of the parameters that reflect the competence of a teacher (Rovegno, 2003; Tsangaridou, 2006). In this respect, Shulman's seven categories of teacher knowledge have become popular globally. In Japan, Yoshizaki (1987) defined seven realms of teachers' knowledge based on Shulman's research. Both Shulman and Yoshizaki placed utmost emphasis on Pedagogical Content Knowledge (PCK). PCK refers to complex and high-level expertise in responding instantaneously to various situations that arise during lessons. Therefore, it is very important for their growth that teachers develop knowledge. However, the concept of teachers' knowledge is not clear (Rowland.et al., 2009). According to Hegarty (2000), teachers' knowledge can be gauged through their lessons. Furthermore, effective reflection on lessons is very important to the growth of teachers' knowledge (Rowland.et al., 2009). It is also necessary to consider what kind of knowledge could be extracted from student teachers' reflection.

For the present study, Shulman's (1987) and Yoshizaki's (1987) theories were judged as an appropriate theoretical framework to interpret teachers' knowledge. According to their theories, teachers' knowledge includes knowledge of children, content, teaching methods, curricula, as well as PCK, which is a combination of all of these. We then judged that we could confirm the existence of these type of teachers' knowledge from student teachers' reflections on lessons in teaching practice.

The subjects chosen for this study were eight junior high school PE student teachers who teach a total of 27 times in 4 weeks. We held case conferences with a mentoring teacher for all their lessons. Drawing from previous studies (Shulman, 1987; Siedentop, 2004; Yoshizaki, 1987), we created and defined a category of PE teachers' knowledge. Based on this, we studied and drew conclusions from reviews and discussions at the case conferences.

This study yielded three results, as follows. Firstly, the student teachers' knowledge was transformed, upon reflection, into a more complex form as their lessons and case conferences were repeated. Secondly, they displayed a small amount of PCK in the case conferences, but this was not considerably visible in their lessons. Thirdly, repeating lessons and holding case conferences in a short period of time, in addition to advice from a mentoring teacher or colleague, led to the establishment of knowledge and practical growth.

There are two possibilities for teacher development that we obtain from this study. First of all, by analyzing teachers' reflection on lessons using the category we created for PE teachers' knowledge, one can objectively observe their characteristics. Furthermore, this can provide an index to record and facilitate growth. However, there is scope for further research on PE teachers' knowledge, and by comparing this study with research in other countries around the world, we will be able to create more useful and productive categories. This is something we would like to study and research further.

Becoming a Beginning Teacher Educator in Japan: How does beginning teacher educators change identity through teacher assistants and lecture?

Shotaro Iwata, Anja Swennen, Vrije Universiteit Amsterdam, Netherlands; Aiko Hamamoto, Hiroshima University, Japan

The purpose of this study is to answer the following two questions. (1) How can the PhD course between social studies students and physical education students who have experience as teacher assistants support these teacher assistants in their development as teacher educator? And what are the conditions that will promote or inhibit that development? (2) What are the characteristics of a program to develop the teacher assistants expertise as teacher educator? In a number of countries around the world, there have been policy recommendations regarding the quality of novice teacher educators and the professional development of novice teacher educators (Swennen & Van der Klink, 2009). However, the majority of teacher educators does not have the proper support and mentoring for their professional development (Van Velzen, Van der Klink, Swennen, & Jaffe, 2010). This is also true for teacher educators in Japan (Iwata et al., 2018). In Japan, it is common that beginning teacher educators - such as faculty of university, PhD students and master students – teach undergraduate teacher students as teaching assistants and develop their own teaching abilities. The hardly receive any formal education or mentoring to prepare them for the complex task to educate and supervise teach-

ers in the early stages. We have conducted research using the following methods and data collection. Data was collected from semi-structured interviews with 6 teacher assistants (Merriam, 1998), and from the journals written by these 6 teacher assistants. An interview guide was created on the basis of a consultation with 3 collaborative researchers (specialists in curriculum and instruction), and on the findings of previous research and send to the teacher assistants in advance.

According to this research, the findings can be summarized as follow. Firstly, the teacher assistants developed into teacher educators as three different walks of professional development (Staton & Darling, 1989). However, a qualitative difference could be seen in the process and aims of the individual teacher assistants' development, for instance, "identity" as teacher educators and its change. Secondly, the in-service teacher educators had different "professionalism" each other. Nevertheless, there is scope for further research on beginning teacher educator of professional development, and by comparing this study with research in other subject and countries around the world.

The Development of Future Professionals Wisdom-Based Capacities – the Strive for Educating Sustainable Society

Sandrita Škėrienė, Kaunas University of Technology, Lithuania

The aim of this research is to reveal the possibilities how to develop teacher's wisdom-based capacities that lead to transformation of consciousness needed for sustainability. Education plays an important role in promoting the issues of sustainability; the later creates new challenges for education. Thus, emerges education for sustainable development as well as society (Seatter, Ceulemans, 2017; James, Card, 2012). The focus is made on the framework of competencies for sustainable development (Wiek et al.,

2015; Frisk, Larson, 2011) disclosing their connectedness to pedagogical approaches (Lozano et al., 2017). Teachers as future professionals must be able to cope with the deepening problems concerning the sustainable future. However, little emphasis is placed on teacher education in order to address the issue of their professionalism in sustainability. The research carried out in the three main teacher training areas, namely, for accountability, effectiveness and policies, for the knowledge society, and

for diversity and equity (Cochran-Smith et.al., 2015). In other words, the emphasis is made more general and professional competences, skills, covering the development of teacher's personal cognitive and emotional areas. Stressing that the teacher's as learner's being must be essentially based on the ontological process which indicates the direction of the epistemological process (Barnett, 2007), the question arises whether this is sufficient. While sustainability approach involves environmental, economical, social dimension, contemporary research (Burford et al., 2013; Collins, 2010) argues for the need of spiritual dimension integration. Based on these assumptions, the creation of sustainable future calls to engage the spiritual area of teacher's personal development.

The literature review method is applied seeking „to identify what has been accomplished previously, allowing for consolidation, for building on previous work, for summation, for avoiding duplication and for identifying omissions or gaps" (Grant, Booth, 2009, p.97). The research shows two main findings. First, reveals the wisdom-based peculiarities of both intelligence and existential spirituality that combine spiritual intelligence. Second, presents how the development of teacher's spiritual

intelligence deepens the formation of new world views and enables to move to broader synthesis, integrating, and understanding constantly asking „Why?" while balancing teacher's various self-interests with the interests of others, integrating their past and future when searching the meaning. The development of spiritual intelligence leads to teacher's personal as well collective (through students learning) transformation of consciousness which is need for sustainability.

The approach integrating spirituality in teacher's education specifies new requirements for a teacher, namely, becoming a teacher as a moral philosopher (Chaudhary, Aswal, 2013), and teacher as spiritual intelligence leader (Ker-Dincer, 2008). Like spiritual intelligence (King, DeChico, 2009) grants individuals with the capacity of sustainable performance at extraordinary levels (Salicru, 2010), it helps for creating global awareness of student (Sisk, 2008). Spiritual intelligence influences both professional and personal life and can help to change the perception of philosophical foundations as well as practice (Zohar, Marchall, 2006) while teaching in a wider context of meaning and values.

Toy Libraries in multiple learning spaces: Teaching, Research, Extension

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The present work aims at analyzing the pedagogical mediation practices carried out in a toy library at a University Estácio de Sá in Baixada Fluminense in the state of Rio de Janeiro (Brazil). For the Course of Pedagogy and College degree in general, this space of interaction and work becomes a laboratory for research, extension and study of ludic-pedagogical practices, which objective is to make possible the scientific production on education and the act of playing, besides enabling to stablish a link between theory and practice in teacher training. Thus, the study discusses the toy library as a privileged space of playing, and its relationship with teaching-learning processes and didactic-pedagogical strategies, in addition to establishing itself in this dialogue as a space for research and extension. The empirical study has as central authors for the debate Caillois (1990), Huizinga (2000), Kishimoto (2002), Brougère (2002), Piorski (2016), among others cited throughout the paper. Callois presents a classifica-

tion of games that dialogues with the time, since many of these ideas cross the social history and representations of games and jokes. Huizinga proposes that playing is a free activity and, at the same time, it is full of rules that articulate in and of themselves, at the moment of fun and play, suggesting an interesting paradox: freedom with rules. In this direction follows Kishimoto, defining fun, toys and playing as objects-activities that say much of the historical-social context of a group and its cultural productions. Piorky takes the four elements - water, fire, earth and air - as pillars for structuring the games and toys, archetypical activities present in human fossil - childhood. These authors are basal in the conception of what we defend here, that is, playing as an activity of investigation and construction of knowledge. We take as a guiding line the playfulness in multiple contexts of learning, especially in the space of the University Toy Library. Our considerations are based on these lived experiences and theoreti-

cal studies that intend to mobilize the reader in order to comprehend the proposals involving playing and games as a source of knowledge and constructions of learning. The considerations of the study are based on empirical observations and experiences of the Monitor Team in the mediation of BrincArte Toy Library as a space for teaching, research and extension, guided by theoretical studies in order to understand the interactions with children who attend the space. Thus, the work seeks to bring together the discourses of students and teachers involved with the playfulness in their research and experiences in the formal and non-formal learning spaces, which strengthens the practice and the interdisciplinary look over the multiple forms of "play learning". This study is linked to the Group of Research Learning Strategies of the University Estácio de Sá Campus Nova Iguaçu, in the Line of Research Meaningful Learning and the Ludic.

Impactful practice based research for staff developers in Higher Education

Anja Swennen, Sjoerd Sinke, Vrije Universiteit Amsterdam, Netherlands.

In our interactive workshop we discuss the results of a study about the impact of scholarly activities (Lieberman, 1992) by a team of staff developers and advisors for the university (which we call Team Higher education). Team Higher Education belongs to a department that is part of the university and it is therefore important that all team members are engaged in research. Being research active is an impactful professional development activity that helps educators to improve their own work (Nichols & Cormack, 2016: Van der Klink, Kools, Avissar, White & Tanaka, 2016). It also helps the team members to understand research and identify with the researchers with whom they work on a daily basis (Bath & Smith, 2004). In July 2017, the team started a two-year project in which all team members are supposed to participate. The main goal of our study is to find out if the scholarly activities the team members engaged in have impact on their work and if they develop an identity as scholarly educator (Swennen & Geerdink, 2017)

Team Higher Education consists of 15 people who work as staff developers and advisors. Five of them have their PhD and the others have a master level. Some are, mostly on a voluntary basis, involved in practice based research. For qualitative research, we collected data at various moments in the process by means of formal interviews, small questionnaires and note taking during meetings. We also had access to all documents the team members wrote during the project.

The results show, among other things, that there are large differences between team members to the extent that they (want to) be involved in research and the extent to which they appreciate the scholarly activities in which they are involved. About two thirds of the team members is positive about the project. There main identity is for and foremost that of staff developer (advisor or lecturer), but they also report that their identity as researcher is increasing, as part of their identity as staff developer. These team members also use the research activities to improve their work or have the intention to use it. Participants who are not able to fully participate give as main reasons lack of time or teaching and advisory task that (have to) come first. This is in line with the findings of Bath & Smith (2004) and Ellis et al. (2014) who report that the characteristics of the work of staff developers and the research culture of their workplace refrains them from fully participating in academic work.

Attitudes and values of Teacher Educators

Elisabeth Amtmann, Marlies Matischek-Jauk, Georg Krammer, University College of Teacher Educations Styria, Austria

Attitudes and values guide human actions and behaviour. Therefore, they are regarded as being the core elements of competences (Erpenbeck, 2010). Nevertheless, they are hardly explicitly mentioned in competence models, professional standards or put in the focus of research. This presentation takes a closer look at attitudes and values of teacher educators, who are of great importance in supporting teachers throughout their careers (European

Commission, 2013). Besides their expertise on the content and didactical level, teacher educators act as role models in teaching. It can be assumed that they have a remarkable influence on the quality of their student teachers' learning process and contribute to the development of norms, values and the enhancement of social cohesion (Snoek & van der Sanden, 2005). This conclusion is reaffirmed by a recent study showing that students closely interlink excellence in teaching with the teacher's personality (Warm & Vettori, 2018).

The presented results come from a longitudinal study on academic teaching at the University College of Teacher Education Styria (2016 – 2020) following a mixed methods approach. The Teaching Competence Model of the Science Space Styria (TCM-S), which includes attitudes and values (respect and empathy, diversity awareness and openness to self-reflection) as one of four competence clusters, serves as a reference framework. In order to include the perspectives of various relevant stakeholder groups a multi-perspective design has been chosen. Apart from teacher educators (N=69), student

teachers (N=210) were asked about their expectations at their first semester (t1) and their experiences in the second year (t2). In addition, semi-structured interviews with randomly selected students were conducted (N=35). In the paper presentation the findings of these four different surveys will be presented and comparatively interpreted within and across stakeholder groups. First results show that students regarded all six items referring to the competence cluster attitudes and values as being very important and put emphasis on respect and empathy. These findings were corroborated by the results of the interviews. The results offer the opportunity to identify teacher educators' attitudes and values regarding academic teaching and analyse them in comparison with students' expectations and experiences. A perspective that might help to minimize a blind spot regarding relevant teacher educators' competences. Finally, the presented findings will be discussed with regard to the professionalisation of teacher educators and the implications on human resource development.

Searching for "the soul of teacher education" within Europe

David Powell, University of Huddersfield, United Kingdom

The on-going national policy debates about the role of teacher education, teacher educators, and teacher supply in Australia and the United States have led some academics to describe this as "the struggle for the soul of teacher education" (Green, Reid, and Brennan, 2017, p.41). Is there are a "struggle for the soul of teacher education" in Europe too? The intention of this interactive presentation is to engage European-based teacher educators in the debate about "struggle for the soul of teacher education". Its starting point is to unpack the notion of "the soul of teacher education" and explore what this might mean

for teacher educators' practices. The main part of the session will invite participants to respond to Zeichner's (2018, p.14) concern that some teacher educators "do not practice what they preach" by considering and answering four questions: What does "the soul of teacher education" mean for you and your teaching? ; What shapes "the soul of teacher education" in your country? How might teacher education shape "the souls of [student] teachers" (Zeichner, 2018, p.15)? Do teacher educators' practices shape the lives and souls of their student teachers' pupils, their families and their communities?

"Do we create space for processes?" Teacher Educators' perceptions of their work task

Birgitte Malm, Mid Sweden University, Sweden

The overriding aim of this study is to shed light on ways in which teacher educators' intentions, actions, relationships and choice of content contribute to influencing the student teachers' participation, learning, behaviour,

knowledge and competences. Teacher educators cannot but be in relation with student teachers. Furthermore, these relationships are always embedded in the context of a particular teacher training institute, that is characterized

by particular structural and cultural working conditions. Aspects regarding 'students and their education' and 'students, teachers and learning in any given educational situation' are incorporated into what Olofsson (2013) calls 'a teaching contract'. This is described as being a mutual, presupposed and relatively stable agreement between students and teachers on the aims and content of the teaching programme. Of interest is not primarily the situation as such but also the process whereby such reciprocity is established and emerges.

Previous studies (Kelchtermans & Deketelaera, 2016; Vanassche & Kelchtermans, 2014) have shown that the relationship teacher educators seek to establish with their student teachers resembles the envisaged qualities of the relationship between the student teachers and their future students; not just professionals to train, but persons to support in their full development as human beings. These teacher educators derived a strong sense of positive self-esteem and personal meaningfulness from caring for their student teachers. The personal and appreciative relationship they strived for was at the same time also personally rewarding in terms of job satisfaction. In view of this, and more specifically, this study seeks answers to the question: How do teacher educators perceive of their task? To this end, semi-structured interviews were held with twelve Swedish teacher educators working in

an Early Childhood Institution. The interview questions were divided into two main categories, those pertaining to the self (teacher educators' experiences of their work situation), and those pertaining to the students (teacher educators' interpretations of student evaluations and experiences). Afterwards the interviews were transcribed, qualitative data analysis was conducted and themes pertaining to each specific question were identified. In this article the following five questions are in focus: (1) What, in your work situation, are you most satisfied with? (2) Describe your approach to students (3) What dilemmas do you experience and how do you solve them? (4) In what ways do you feel that the teacher training programme has prepared student teachers for their future role? (5) How do you think we can best maintain quality in teacher education?

Research on emotions in teacher education (as relational, socially constructed, reflecting cultural norms and power structures) not only contributes to enhance theory development, but also to the practical agenda of designing and implementing powerful learning opportunities for student teachers (as well as teacher educators). A closer examination of teacher educators' normative beliefs is thus essential for future research on teacher education professionalism.

How do teacher educators view practical knowledge in relation to the theory and practice 'gap'?

Alaster Douglas, University of Roehampton, UK

This study aims to enable teacher educators to address the challenges reported in international literature on the divide in the theory and practice of teaching. This divide or gap has been associated with what has been termed the 'transition shock' (Veenman 1984) where pre-service teachers adjust to school practices with little regard to previously discussed theoretical insights on teaching and learning. Also seen in terms of socialisation (Robinson 1998) and in relating general theory to specific contexts which may appear less relevant to practice, resolving the perceived gap will contribute to developing sustainable perspectives on theory and practice in teacher education.

A challenge in teacher education is to combine theory and practice into a coherent whole. This study considers Vygotsky's (1978) spontaneous and scientific concepts and the relationships between them as an important distinction for developing mature concepts which can be applied

in multiple settings. Engaging in research using socio-cultural theory as a way of combining theory and practice was discussed in interviews. With a concern for different kinds of knowledge and being close to practice and explicitly employing theory, socio-cultural theories can bring practice and theory together (Author 2013).

Interviews with six teacher educators were undertaken on how they saw practical and theoretical knowledge in their work. Particular focus was on their views of this in relation to research activity they had experienced with pre-service teachers. Research findings are likely to identify spaces in the teacher education curriculum which can create sustainable opportunities for critiquing theories of practice by exposing them to critical scrutiny. Employing research within teacher education activity may create distance from everyday practices and offer a social space for teacher educators, pre-service teachers and teachers to

collaborate. A current view dominating policy documents nationally and internationally is concerned with practical knowledge being recognised as an important element in teacher education. This is especially evident in England and in other countries where new teachers entering the profession experience professional preparation which is entirely practical (Furlong 2013). The emphasis on the practical brings the diversifying role of the teacher educator (White 2014) into focus.

A Community of Inquiry as a tool for improving teacher education; a participary research

Gerda Geerdink, Fedor de Beer, HAN University of Applied Sciences, Netherlands; Fer Boei, Martijn Willemse, Windesheim UAS, Netherlands

As members of the Dutch special interest group Research by Teacher Educators, we organized and supervised a Community of Inquiry for teacher educators of different institutes in the Netherlands. The CoI was meant to foster the individual research knowledge and skills of the participating teacher educators as well as (their contribution to) the improvement of the quality of their institutes for teacher education.

Research by teacher educators is considered a means to achieve professional development and to improve classroom practices (Geerdink et al., 2016; Grossman, 2005). A Community of Inquiry seems one of the distinguishable forms of professional development activities meant to lead to more knowledge and skills for teacher educators and for their institutes. Cochran-Smith (2003, p. 7) concludes that 'the opportunity to engage in inquiry within a learning community may be a vital part of teachers' and teacher educators' ongoing education'. Admiraal (et al., 2012) investigated the conditions that make a CoI effective for described and intended improvement. For this research we formulated the question: Can we organise a CoI for teacher educators that leads to the dual goals of improving personal skills as well as institutional qualities?

We conducted a small, participatory, qualitative research in which four teacher educators participated. Data were collected through two questionnaires, participants' written logs during the twelve-month period of attendance, and observations of meetings. Data were analysed vertically and horizontally.

We succeeded in managing two-thirds of the conditions described as crucial conditions for a CoI to fulfill the dual goals. The working methods and interaction between the participants were good. The support by the management of their institutes was limited for three participants. All the participants learned much about performing practice-based research. Participating in the CoI had an impact on their professional acting, but it had no impact on their institutes except for the participant who received enough support from his manager and colleagues.

We can confirm the relevance of the crucial conditions for an effective CoI as investigated by Admiraal (et al., 2012). The research makes clear that teacher individual professionalization is not enough to improve the quality of teacher education.

Patterns of presence of educators in online discourse during academic online conferencing

Smadar Bar-Tal, Michal Schleifer, Levinsky College of Education, Israel

Online conferences for academic communities can allow continuous active participation in an accompanying academic and professional discussion written into a document known as an Internet 'chat'. In this environment, participants are invited to react, ask questions, contribute knowledge and form a learning community.

The theoretical frame of the present study draws on discourse research inspired by discursive psychology (Edwards & Potter, 2005). Understanding the characteristics of inter-participant communication and the characteristics of the online environment can assist the formation of a more effective online environment and its optimal

adaptation to participants' needs. The characteristics of participants' communication can be investigated through analysis of their writing during a one-day conference in the location intended for this purpose on the conference site. This writing in an online environment is known as a "chat". In such a chat, participants apply communication behaviors and interpret them. Thus, a chat accompanying an online conference is a place in which participants present themselves, discuss problems, suggest reservations, insights, remarks and criticism. Analysis of such a chat can inform thinking about which skills and talents are essential for effective distance teaching and learning. Garrison, Anderson & Archer (2000) proposed a model for the examination of computer-mediated communication in online conferences for educational purposes. This model defines three essential presences: social, cognitive and teaching, used in online communication to support effective learning. Each presence is represented by key words and expressive words, as elucidated below. The research focused on an examination of these three presences as they are expressed in chats during an online conference. Analysis of the presences will hopefully advance pedagogic knowledge for communication technology users as part of the knowledge domain relating to technology in an online environment.

This study investigates the character of a chat accompanying an online academic seminar. Combined qualitative and quantitative data-collection and analysis were employed to identify characteristics of teaching, cognitive and social presences as defined by Anderson and Archer (2000). 87 out of 283 seminar participants participated in a chat containing 827 speaking turns.

Findings revealed different presences representing research participants' different perceptions concerning their roles in the chat. Practical proposals are suggested for effective management of online seminars, pointing up the need to foster essential skills for participants and moderators. To summarize, analysis of the chat accompanying the online seminar is one possible means that can throw some light on the conditions that enable the maximization of learning and teaching potential in the online environment. The present study revealed the need to relate not only to teaching, cognitive and technical aspects but also to social components and to the participants' roles in the chat.

Preparation for different school contexts - mentor´s and student teacher´s experience

Laila Niklasson, Mälardalen University, Sweden

The aim with this study is to increase our knowledge about how work is carried out during practicum to let student teachers experience different pre-conditions for school. In 2015 there was a top among newly arrived children not only to Sweden but to other countries in Europe. Even US had a raise in newcomers (Sugarman, 2018). In addition there are other differences due to privatization during the latest decades which resulted is a differentiation due to choice of preschool and school. Differences occurs between preschools and schools, simply by the fact that preschools and schools have different profiles and work teams work in different ways. In addition there are socio-economic differences which is also a European phenomenon (Flores and Ferreira 2016). In summary, structural, organizational and pedagogical varieties causes situations where one Student teacher can experience practice which is very different compared with another Student teacher. To be able for Student teachers to participate in work for inclusion and democracy, they need to be aware and trained to observe and acknowledge differences in a variety of ways. A sustainable society can be perceived as including some stability and a question is how to achieve it when flexibility, differences and change on different levels are the reality. As a support to such an awareness there it is written in a practicum contract in this case study from Sweden that Student teachers should visit preschools, schools with different circumstances. To follow up whether the practicum situation offers student teachers to experience different pre-conditions several data collections were carried out. Results from a first data collection, showed that contact persons from organizers of K-12 (mostly teachers), municipalities as well as private, in two counties suggested a broad definition of pre-conditions, organizational as well as social. Their understanding was that there were few models or routines concerning whether the student teachers experienced differences and whether they mostly stayed at one unit. Results from a second data collection, showed that contact persons from unit level (teachers who were mentors in practice schools) in one municipality confirmed that differences could be organizational, such as experience from different age groups, methods and visit to preschool class, as well as social, such as experience of multi-language groups or whether families are supported

by welfare. Preliminary results from a third data-collection carried out among student teachers show that some Student teachers visit different units, others do not.

Sometimes it is a choice of themselves, sometimes visits are not arranged as routine.

Academic Leaders and Professional Development of Teacher Educators

Leah Shagrir, Levinsky College of Education, Israel

The presented research examined academic leaders' world views with regard to professional development of teacher educators, and examined how their perceptions are expressed in actions. Academic leaders are those with the most senior positions who are responsible for the academic management of departments, programs and faculties. As part of their senior role, the leaders are tasked with maintaining quality of learning and teaching, developing and strengthening the staff by maintaining professional work, initiating and developing appropriate resources to serve the faculty, proposing solutions to difficulties in everyday management, and more (Aziz, et al., 2005; Gmelch, 2013).

Teacher education institutions are required to regularly evaluate their performance and productivity, which are measured according to various parameters. One of these parameters - examining faculty achievements - is the number and quality of studies undertaken and published (Brooks, 2005; Rosser & Johnsrud, 2003). To this end, institutions have a policy of encouraging faculty to continue their professional development. They institute encouraging actions which include providing opportunities and budgets for research, providing professional support, and instituting evaluation procedures and academic promotions (Dickson, Mitchell, Ott, Paulus, & Wild, 2012).

The aim of this research was to identify the attitudes and role perceptions of academic leaders regarding the issue of teacher educators' professional development.

The point of departure for this research was that it is important to examine the essence of the affinity between leaders' professional world views and the actions they take in order to promote the professional development of faculty for whom they are responsible.

In order to get answers to the research questions, an anonymous, online self-completion questionnaire was used. The questionnaire contained 22 items presented in three parts: the first part asked about respondents' attitudes towards the issue of faculty professional development in higher education, the second part sought to examine the extent and intensiveness of professional development that participants themselves carry out and the third part sought to examine what actions academic leaders take in order to guide faculty to engage in professional development.

Findings show that despite the fact that leaders view professional development as leading to improving teaching and enhancing the reputation of the institution - only some of them introduce actions such as leading processes or establishing infrastructures. Most of the leaders punctiliously encourage faculty to continue to develop but the weak link is that only about half of them carry out a limited amount of actions. In order to overcome this weak link, recommendations are proposed for academic leaders and for teacher education institutions.

Practitioner Research as "Brave Research"

Anja Swennen, Vrije Universiteit Amsterdam, Netherlands, David Powell, University of Huddersfield, United Kingdom

Recent events in the world raise important questions about the role of educators, education, and research in making the world a "better" place to "practise and live in" (Kemmis, McTaggart and Nixon, 2014, p.27). This interactive presentation presents and seeks to develop the

concept of "brave research"; a response to the societal issues we face. The word "brave" in this context is taken from Arao and Clemens's (2013) article "From Safe Spaces to Brave Spaces", which deals with new ways of thinking about diversity. We argue that greater diversity

and inclusivity is needed in educational research and the results of it will benefit researchers, educators, students, and the communities we serve. For this to happen, we argue that academic researchers, as well as practitioner researchers, need to be "brave" in their choice of research topic and research design.

Firstly, we want to discuss some aspects of practitioner research that might characterise "Brave Research", such as the insider perspective (Sikes & Potts, 2008), arguing that it takes courage for practitioners, teachers, and teacher educators in our case, to engage in this kind of research. Secondly, we explore how academic researchers need to be "brave" and apply for types of funding that include practitioners, students, and the local community as full partners, as funding bodies tend to favour and fund traditional research by well-known professors. Thirdly, we consider how governments and other funding bodies can be "brave" and fund diverse forms of research that promote inclusivity and sustainability. Fourthly, we argue that "Brave Research" means that practitioners and academic researchers have to accept each other's research as valuable contributions to understanding and improving various aspects of education.

But acceptance is not enough. This could lead to the co-existence of researchers, each "in their own world", with their own culture and language, but without any real understanding, appreciation, and connection to a wider research community (Swennen, Geerdink, and Volman, 2017). To fully understand the diversity of cultures and languages within educational research, we need to not only learn about the various research traditions but also develop new ways of doing research. To conclude the paper, participants will be invited to imagine how "Brave Research" might address issues of power, social justice, inclusivity, democracy, and sustainability.

Learning from Professional Dilemmas Identified by School- and Institute-based Teacher Educators within the Context of School-Based Teacher Education.

Elizabeth White, UNiversity of Hertfordshire, United Kingdom;
Miranda Timmermans, Avans University of Applied Sciences, Netherlands

The environment for teacher education is rapidly changing, leading to diversification of teacher educators as an occupational group, and increasing numbers of school-based teacher educators (SBTEs). Research on the professional development of experienced institute-based teacher educators (IBTEs) in different countries has identified a range of professional development issues and activities (Czerniawski et al., 2017; Van der Klink et al, 2017), but less is known about the professional development of SBTEs (and IBTEs) in the context of school-based teacher education (White et al., 2015).

This research uses dilemmas as a tool to explore strategies that teacher educators use to manage inconsistencies between beliefs and practice. Dilemmas may be a helpful way for teacher-educators to articulate their practice and examine their beliefs (Tillema & Kremer-Hayon, 2005). Dilemmas in teacher educators' professional practice in the current context were identified by 24 individual teacher educators, through writing a brief reflective narrative account of a significant challenge in their work. The teacher educators were attending workshops at conferences, or within initial teacher education partnerships.

6 dilemmas were provided by IBTEs and 18 were provided by SBTEs. We were interested in the 'What': what are the dilemmas that teacher educators identify in their work that seem to differ from their underlying beliefs or dispositions on teacher education? We were also interested in the 'How': how do teacher-educators cope with or manage these dilemmas in their practice?

These narratives have been developed into scenarios that can be used to stimulate reflection and discussion about practice and to share insights. These scenarios should provide a useful tool for the professional development of teacher educators in collaborative contexts (the so-called third space, Burch & Jackson, 2018) as well as with SBTEs and IBTEs independently. Through provision and use of these research-informed tools for professional development, teacher educators and researchers can: contribute new approaches for re-affirming democratic practices in initial teacher education; nurture sustainable partnerships in challenging contexts; and thereby meet an identified professional development need (White et al, 2015).

A Teacher Educator as a Coach: Use of the GROW Model in Coaching to Facilitate Student Teachers' Self-Acceptance

Hironori Sasaki, Chugokugakuen University, Japan

Education has a responsibility to allow students to realize their wellbeing for building a better tomorrow. How can I as a teacher educator contribute with new approaches in teacher education for helping student teachers? One of factors of well-being is self-acceptance. Nowadays, a variety of roles for a teacher educator have been proposed: a teacher of teachers, a researcher, a coach, a facilitator, a practitioner, a gate keeper, a curriculum developer, etc..I would like to say that, as a teacher educator at a local small university in Japan, the role of coach is top priority in recent years and a teacher educator as a coach should encourage pre-service teachers to have confidence in teaching. In my previous research, it has been made clear that my university students have a low sense of self-acceptance in teaching. Their low self-acceptance should be raised through reflection facilitated by the coaching of a teacher educator.

Schön proposed the concept of 'supervision' to support teachers' reflection [1]. Supervision includes coaching. In the previous study, coaching has been used to facilitate the reflection. Although they showed the example of conversation in coaching, the sequence of coaching to raise their self-acceptance has not yet been discussed in the context of the GROW model in teacher education [2].

Therefore the GROW model in coaching has been introduced to facilitate the reflection in this study. The GROW model is a sequence of questions following four distinct headlines: Goal, Reality, Options and Will. Consequently, the purpose of this study is to examine whether coaching using the GROW model for student teachers could facilitate their reflections to raise their self-acceptance.

Pre and post questionnaires in the coaching session to measure self-acceptance of student teachers. Analysing descriptions of coaching conversation using the GROW model. In the coaching session, they were given the questions "How did you, or how are you going to solve each problem?" through the GROW model and they gave their answers. Coach: The author acted as the coach. I was authorized as a professional coach by a private coaching association in Japan. Therefore, I have enough ability to implement coaching in this study. Average of several answers of the questionnaires were raised significantly. It has made clear that some responses in the coaching session had changed from situational responses to goal-oriented responses. These results suggest that coaching with the GROW model facilitated their reflections and raised their self-acceptance.

Student teachers' educational biography: Knowledge and conceptions about teaching and learning inside

Vaz-Rebelo, P., Lima, M., Bidarra, G., Barreira, C., University of Coimbra, Portugal

It has been already evidenced that educational biography is an important source of teachers knowledge (e.g. Danielewicz, 2001), either of teaching conceptions or teaching practices. Previous research has also evidenced that educational memories have a close relation with personality characteristics and can be considered an expression of them (Lima, Vaz-Rebelo, Barreira, 2014).

Learning to teach is a long process that begins well before pre-service teachers enter their first teacher education course (Arends, 2008). The student teachers' past and present experiences with places of teaching and learning influence the choices how to enter the teaching profession (Clandinin & Connelly, 1995) and how to develop teaching practices.

This paper analyses student teachers' key memories of their educational biography in order to characterize knowledge conceptions about teaching and learning inside. Participants in the research are 50 students' teachers of Master Teaching courses of a Portuguese University. In their first year Master course, students were asked to develop an educational biography. It was used a form adapted from the McAdams (1997) Guided Autobiog-

raphy. In this scope, student teachers were requested to write eight episodes of their educational life story. These episodes should focus on topics such as: a moment in their educational life story; the oldest educational memory; a memory of primary school; another of secondary school; an unforgettable teacher; decisions on the choice to become a teacher; what kept similar in the educational life story; the most important decision. About each episode, it was proposed to write two paragraphs, presenting the following information: What happened? Where did it happen? Who was involved? What did you think and feel at this moment? Why this was an important moment in your life story?

Autobiographical episodes were analysed through content analysis. Preliminary results point to the important role of family and teachers on the decision to become a teacher, teachers being the most prominent influence. The choice of the course and the profession are considered the key decisions in a life story marked by the resilience. Teaching knowledge and conceptions also emerged.

The finish of the teaching career of the generation of the Polish transformation. Biographical research

Wanda Drózka, The Jan Kochanowski University in Kielce, Poland

In the text of an attempt to bring the reality of living and working conditions of teachers in the in the final phase of their career. The subject of research and analysis done diaries and autobiographies of the older generation of teachers at the age of 55-65 and above, born in the years 50. and 60, teachers in some parts are still active, but for the most part they leave already on pensions. Due to the location of the historical-sociological should be considered for generation of the Polish transformation. The situation of this generation of teachers Polish is special.

Could be based on biographical research to put the idea that change is the essential context of their whole life and career.

The three main overlapping changes was their participation in the career cycle: changing the regime in Poland (1889) in the early stages of a career; changing the educational phase of stabilization of life and professional (education reform in Poland – 1999), a global cultural change in the world (among others. A. Giddens). It should be added that this generation is entering in another

change, with the third in their career and educational social realities. The new education reform in Poland (2016/17) breaks up with in 1999 year education system, with gymnasium, with the return of the old structure of education.

The question is, what is the final of their history, in an older stage of life and at the end of a career? What has survived of their dreams, aspirations, ambitions and efforts? What message would refer to his successors and to society as a whole. By E. H. Erikson, it can be assumed that the phase of late adulthood main mission and life force becomes a concern, and then the wisdom, and the crisis in this period appears, derives from the tension between integrity and despair. In the initial analysis of the texts you will notice, that the generation ends his career to balance, as it were, between pride and with pique (ran-

cor). The main and thread, which slides out to teachers' descriptions and considerations, expressing their reflective, is concern about the state of humanity, and fear of the continued threat. In the interpretation of the values and aspirations of teachers experiencing transformation era of transformation in Poland, to observed by them the crisis of humanity, one would refer to the concept of general education to M. Nussbaum and her vision of a remedy necessary to combat the crisis.

In addition to biographical method applied to studies in the version of the national competition on the diaries and autobiographies of teachers under the slogan: "Teaching the message of". Analysis of 98 were collected from 2014-2016 texts, and autobiographical statements 32 study years 2014/15, nt. "The meaning and dignity of my life and work".

Continued Training and Lato Sensu Post-Graduation Courses for Professional Update

Figuereido, Ana Valéria de; DUARTE, Ilda Maria Baldanza Nazareth; COSTA, Agenor Pereira da; MAGALHÃES. Edith Maria Marques, Iguaçu University, Brazil

The continuous training of teaching professionals, as well as in other fields of knowledge, has become a necessity and a requirement in the world of work. The constant updating in the area of education is an urgent request in its diversity and multiple forms of teaching-learning in the teaching work in the classroom and in the various educational spaces. Authors such as Libâneo (2004), Nóvoa (1999), Gatti (2003) among others, have brought to the subject many glances, but of agreement when it comes to the urgency of discussing the theme. Continuous training - personal and professional - is closely related to the subjects' socio-cultural formation, which makes the university a decisive place in the academic trajectory of teachers, graduates and students in general. Based on these premises, the present work aims to analyze the reasons why professionals graduated from various fields and fields of knowledge seek the post-graduate course lato sensu for their continuing education. We start from the following questions: what is the importance that the graduates attribute to the continued formation in their academic course in the University? What are the strategies most pointed out by these subjects in the daily life of their formation? What are the main reasons why they are looking for a lato sensu postgraduate course? The study has as methodology the content analysis as prescribed by Bardin (1977), based on the data collected in questionnaires with open and closed questions, answered by students of

the lato sensu specialization courses in Art Education, Teaching of Higher Education and Psychopedagogy, from the Iguaçu University, a private higher education institution located in Baixada Fluminense in the state of Rio de Janeiro (Brazil). For the scope of teacher training it is important to know the conceptions and practices of continuing education of the graduated students, investigating the importance of this participation in their academic formation. Through a systematic analysis of the collected data, it will also be possible to establish what actions can be taken, reinforced or even avoided within this framework, implementing the best quality of these training strategies. The research also meets the guidelines for teacher education for Higher Education, which recommend that the teacher of this level of education should be able to teach, research and extension, and he is expected to articulate the elements of this triad in a manner broad and consolidated. Thus, the reasons why the lato sensu graduate courses are sought may also be interrelated with the teaching practice, which the study in question refers to. This study is linked to the Pedagogical Practical Research Groups, Resumes and Training Spaces (PPCEF UNIG) and Research Group School Management and Public Policies (GEPP UNIG), both affiliated to the Iguaçu University Campus Nova Iguaçu, in the Research Lines Training Spaces and Curricula and Public Policies, Pedagogical Practices and Diversity.

Understanding the Contribution of Student Evaluation of Teaching to Sustainable Teacher Professional Learning

Simge Sübaşı, Istek Acibadem Secondary School, Turkey; Hilal Atli; Yasemin Kırkgöz, Çukurova University Turkey; Hui Lu, University of Glasgow, UK ;Gaele Macfarlane, University of Glasgow, UK ; John O'Dwyer, Bilkent University, Turkey ;Sukran Saygi Middle Eastern Technical University, Turkey

Globally, learners of English have increased significantly and numerous are the universities which are offering instruction in the medium of English. In keeping with the current neoliberal climate in Higher Education (HE), world university ranking bodies incorporate student satisfaction survey results in their ranking criteria. Amongst other aspects survey results may be used to provide instructors with potentially useful feedback to contribute to their professional development. However, research into how professional development can be supported by Student Evaluation of Teachers/Teaching (SET) practices is limited. Therefore, this research aims to attempt to understand better the affect that the evaluation of teaching by students has on professional performance. The research question we have to address this is "How does student evaluation of teaching contribute to the professional learning of teachers?"

Sociocultural theory, rooted in Vygotsky's learning theory, recognizes that learners do not learn in isolation, but through dialoguing in a social environment in which meaning is negotiated. The theory suggests that a student does not make meaning regardless of the instructor, and the instructor does not develop professionally isolated from the feedback of the students provided by a Student Evaluation of Teaching (SET) system. SET is a widely used tool for summative and/or formative purposes, functioning for both policing and learning purposes.

Summative SET focuses more on career related decisions. Formative SET serves those interested in the quality of their courses and provides data to further improve the learning experience offered to students (Huybers, 2014). The research will focus on this framework with a view to determining whether the social framework is applicable to SET in the contexts studied, and whether the dichotomy offered by Huybers represents a realistic representation of practices as reported by students in the Turkish context.

A qualitative approach in three separate universities, within an interpretive paradigm, was employed and covered document analysis of current student evaluation of teaching systems and semi-structured interviews. There was total of 30 participants, at each university there was 5 students from the pre-sessional year program and 5 undergraduate students.

This paper will explore the influence of student evaluation on teaching practices from a student perspective. Drawing on the findings, the presenters will provide an analysis of whether student evaluation influences the professional performance of teachers as reported by students. This will contribute to a better understanding of the utility of SET in provoking change in sustainable professional performance through the affect on professional learning.

The intent is to publish an article in a peer-review journal to extend thinking about the use of SET in student perception in a teaching community context.

Sociocultural Adaption of International Students in Russioan Higher Education Institutions: Educational Motivating Factors

Julia Kazakova, Elena Shastina, Kazan Federal University, Russia

This paper examines educational motives and motivating factors during the process of sociocultural adaptation of international students in Russian higher education institutions, namely Kazan Federal University, one of the oldest and largest Russian higher schools. Motivation has an important effect on academic achievement (Hidi & Harackiewicz, 2000), and is integral component of educational and instructional processes (Awan, Noureen & Naz, 2011). The sample consisted of 107 students of Kazan Federal University (56% Russians, 44% foreign). The hybridized sociocultural framework was applied in this study. Using the same approach T. Heng (2018) conducted a study among Chinese undergraduates from USA in order to define the influence of the socio-cultural context on the learning environments.

Methods: Psychological questionnaires were used to rate importance and frequency of different motivating factors, educational motives and estimate the process of sociocultural adaptation in general. The qualitative approach was chosen because of its focus on meaning as it is understood in the context of participants' life experiences inside and outside of the auditorium (Creswell et al., 2007; Phillips & Schweisfurth, 2014). Interviews and psychological questionnaires were used to understand the contrasts in internal goals for achievement in students, to rate importance and frequency of different motivating factors.

Expected conclusions: Experimental work with 107 students of Kazan Federal University has shown that foreign students coming to study from different countries (Uzbekistan, Tadzhikistan and Turkmenia) tend to experience mental and even physical discomfort, which strengthens their general belief in achieving their goal. Tests and interviews showed that international students are well motivated by different factors which externally appear to present better conditions than those they have in their native towns. Motivated studies result in high-quality learning and conceptual understanding, as well as enhanced personal growth and adjustment. Differing in some general attitudes, students still exhibit similar ways of developing educational motives.

Relevance to international educational research: Recently there have been many changes in the general conception of Russian universities, which due to globalization of studies naturally leads to having more international students all around the country (Minina, 2017). The percentage of ethnic minorities among students of Kazan Federal University has grown rapidly lately. Due to considerable differences in climate, geography, religion, national food, culture, customs, international students at fist feel very stressed about the change of sociocultural environment. Habitual communication is broken, they have to adapt to new external and internal conditions. Teachers need to focus more attention on shaping students' goals and influencing their educational motivation. They must be able to identify effective motivational methods to help international students ease their process of sociocultural adaptation and make contrasts in motivating factors relatively neutral. The article describes the psychological process in interaction with social and cultural environment and may serve as a tool for teachers to support developmental strategies.

Developing Student Teachers as Reflective Practitioners for Sustainable Society: Necessary Prerequisites

Loreta Zavadskienė, Remigijus Bubnys, Šiauliai University, Lithuania

Based on the assumption that the design of society in a responsible manner in terms of sustainable future development highly depends on teachers (UNESCO, 2014), this paper addresses the phenomenon of reflective practice as a key competence to be possessed by teachers, the ones who are supposed to encourage and empower the next generation to partake in shaping society (Dewey, 1933, 1938; Rodgers & LaBoskey, 2016). Only by acquiring the competence of reflective practice and adopting the stance of critical reflective practitioners (Mezirow, 1991; Schön, 1983, 1987), teachers will be able to employ reflection in the way that would encourage the development of their students' critical thinking skills and commitment to actions, which in turn would prompt students to reflect on their assumptions and beliefs (Liu, 2015). The underpinning value of reflective practice lays in the proposition that reflection has the potential to awaken students to the social change aspects of sustainability and recognize the opportunities and constraints in the ideological and institutional contexts within which they currently learn or may work in the future (Ferreira and Tilbury, 2012).

Grounded in the premise that the capacity of reflective practice is developmental and needs careful guidance (Allas et al., 2016; Brockbank & McGill, 1998; Larrivee, 2008; Rodgers & LaBoskey, 2016), the main focus of this research study is on the development of teachers as reflective practitioners at the initial stage of their education. Having been treated as one of the contributing assets to the prospective teachers' growth and development as reflective, inquiry-minded practitioners, the concept of reflective practice has gained a wide recognition within the discourse of higher education and has been widely implemented in Initial Teacher Education study programmes (Cavanagh & Prescott, 2010; Collin et al., 2013). For being properly implemented and fostered, the importance of reflective practice needs to be clearly understood by all parts involved into the educational process, such as administrators, teacher educators, and students themselves (Osterman & Kottkamp, 2004). In the current research paper the question that can be stated as a research problem is "What are the prerequisites required for reflective practice to be successfully implemented in contemporary initial teacher education?" Through the lens of teacher educators' perceptions, this study aims to reveal the factors contributing to the development of prospective teachers as reflective practitioners capable to meet the challenges of the 21st century, work towards positive change and help their pupils to develop a sense of social justice and self-efficacy as community members (UNESCO, 2012). The carried out exploratory research was qualitative and employed the method of content analysis. The research sample was purposive/convenient and criterion-based: 12 teacher educators from Lithuanian initial teacher education institutions (University level) preparing only pedagogues participated in the survey. The data were collected by asking the participants to provide written answers to the open-ended questionnaire, the results of which will be introduced and interpreted during the presentation.

The influence of course curriculum on teachers' engagement in professional learning in sustainable inter-national culturally reflexive contexts

Gaele Macfarlane, Kay Livingston University of Glasgow, UK

In this neo-liberal globally competitive higher education environment many universities around the world are offering their degree programmes in English, (Deardon, 2015). To enable students to develop their ability in English prior to starting their studies there are intensive pre-sessional courses provided by English language teachers. These teachers are often an international group with a range of learning and teaching experiences

(Teaching and Learning International Survey, Schleicher, 2016). As with all higher education staff, the pre-sessional programme teachers are expected to engage in professional development to enhance their knowledge and understanding of new learning, teaching and assessment approaches. However, more needs to be known about how the nature of the pre-sessional course curriculum influences this international group of pre-sessional teachers' engagement in professional development.

The objective is to explore how an international group of pre-sessional teachers engage in professional learning and addressing the research question: How does the pre-sessional course curriculum affect an international group of teachers' engagement in professional learning? The analysis of the data discussed and shared in this presentation is part of a larger research study.

Much has been said about how the curriculum and its expected implementation can influence teachers' engagement in professional learning (Biesta, Priestley and Robinson, 2015). Staff members in higher education institutions are increasingly international and research concerning how the curriculum and its implementation in this environment can influence teachers' professional learning is more limited. This presentation aims to add to knowledge by exploring how teachers from different

nations, cultures and learning backgrounds engage in professional learning.

The theoretical framework contributes to developing a better understanding of the heterogeneous culturally reflexive community of teachers in pre-sessional programmes.

The study takes an explorative interpretive case study approach involving the analysis of teachers' experiences and perceptions in three private universities in the three main cities of Turkey. In the study there were 20 teachers with a variety of backgrounds, experiences and qualifications. The participants took part in semi-structured interviews and were invited to share their perceptions of professional learning in their current and previous work contexts and to identify what engaged and or inhibited their professional.

Better understanding of how the course can influence professional learning in a complex international environment. In the current climate of internationalisation in higher education where international staff and students are increasingly the norm rather than the exception, the consideration of how the set course can affect engagement with professional learning has relevance for everyone with responsibility for teachers' professional learning in higher education.

Characteristics of and conditions to support innovative teachers revisited

Kay Livingston, Karl Attard, Maria Assunção Flores, Ton Zondervan, .Gaele Macfarlane.

The nature and expectations of teachers' work in school with pupils is continually changing. Traditional roles of teachers are being reconceptualised and there are ever expanding expectations of teaching to include 21st century key competences. There is also increased value on synergies, communication and collaboration between teachers and schools (European Commission, 2017). This requires transformational change in schools and support for teachers in understanding and embracing new learning and teaching approaches. This presentation will be led by members of the ATEE Research and Development Community (RDC) Professional Development of Teachers. The RDC members have been engaged in a comparative research project over the last 2 years. The focus of the project is on understanding more about how teachers and schools can embrace innovation to provide an education for the present and future of all young people. This presentation provides an insight into the second phase of the research which expanded the number of countries

involved and increased the number of interviewees in the project.

An exploratory comparative research approach was taken. The members of the RDC from 11 different countries conducted semi-structured interviews with teachers, head teachers and teacher educators in their own country. An interview guide was used by all the researchers to ensure consistency in the interview approach and provided prompts for questioning, What makes for an innovative teacher? What qualities do they have as an innovative teacher? And What conditions or characteristics are needed in the school context to support innovative teachers? The interview outcomes were shared with a cross-country group of RDC members who independently coded and analysed the interviews.

The research is underpinned by transformational theory (Mezirow, 2003, Sharon, 2004, Taylor, 2000) and the intersection between the individual and the social. In particular, it draws on transformational strategies:

barriers and opportunities to extending and deepening teacher empowerment to innovate and work in collaboration with others in the school context. Better understanding of the characteristics of innovative teachers and how school leaders and other key stakeholders can support the professional development of innovative teachers. The intention is to publish an article in a peer-review journal to contribute to and extend thinking about the professional development of innovative teachers.

Becoming a teacher: Teacher students' perceptions of teaching and teacher career in Norway, Latvia, and Finland

Eero Ropo, University of Tampere, Finland; Jan Viggo Iversen, Nord University, Norway; Sari Yrjänäinen, University of Turku, Finland; Indra Odina, University of Latvia, Latvia

Teacher education attracts varying amounts of applicants in different countries. In the European level many countries suffer lack of qualified applicants into teacher education institutions. Like the recent report by the European Commission (2013) states career as a teacher "has lost much of its power to attract the most promising prospective teachers". The same report assumes the reasons being in the decline of prestige, deterioration in the working conditions, and relatively low salaries compared with other academic professions (European Commission (2013). However, in this study we do not investigate teachers, but teacher students. We assume that popularity of teacher education in different countries may be related in a complex way to students' perceptions of the profession and teacher work.

With perception as a scientific concept, we mean student teachers' subjective understanding and interpretation of the investigated topic or phenomenon. We refer, for instance, to Biggs (1985) and Entwistle (1991) who have argued that it is students' perceptions of their learning environment that influence approaches to learning and learning outcomes. We assume that perceptions are based on both personal history and social and cultural values experienced by the respondent. Perception is not assumed to be fixed. For instance, contextual factors, like time and place, emotions and moods may influence on the perceptions of phenomena.

The paper investigates teacher students' perceptions of teaching, teachers' work and teaching as a career in Norway, Latvia and Finland. The contexts of teacher education seem to differ a lot between the countries. We will describe the main differences in the presentation.

The informants are teacher students from four universities in Norway, Latvia, and Finland. The data have been collected with an electronic questionnaire and focus group interviews. Both the questionnaire and the interviews were presented using the students' mother tongue. Emphasis was put on the equivalence of the language in the Norwegian; Latvian, and Finnish versions of the Likert scale questionnaire. At least 40 students from each institution responded to the questionnaire. We also interviewed two focus groups of students in each institution.

Initial analyses of the questionnaire indicate that teacher students' perceptions differ statistically significantly in many aspects between the three countries. Interview results will be analysed phenomenographically. Implications of the study will be discussed in the presentation.

Development of a Professional Development Scale for EFL Teachers – Vol. 2

Ozkose-Biyik, Cagri, Yasar University, Turkey; Uslu, Oner, Ege University, Turkey

This study, part of a Marie Curie Career Integration Grant supported by the European Commission, is set out to develop a scale to understand English as a Foreign Language (EFL) teachers' individually-guided and professional activities. The first version of this work-in-progress scale had been presented at the 41st Annual Conference of ATEE in Eindhoven, NL. We are proposing to present the second version at this conference.

Since Creswell (2007) suggests developing questionnaires based on preliminary descriptive data, the scale was initially drafted in light of the data coming from these 28 interviews. The initial draft was reviewed by field experts and was piloted with seven EFL teachers and in each round, necessary revisions were carried out. The scale had 3 sections (demographics, 61 items, and open-ended questions). A test-retest reliability was also conducted with 31 teachers, and .86. was obtained as the correlation coefficient. Even though Özçelik (2010) claims that a sample of 400 participants would be sufficient for such a scale development study, we had collected data from 820 teachers across Turkey.

When analyzing data, factor analysis was conducted, and the extraction method used was the principal component analysis (PCA). When the PCA was conducted by restricting the analysis to five factors, 49.5% of the total variance accounted for the principal components. Since it was assumed that the factors were correlated with one another, an oblimin rotation procedure was preferred for the analyses. Even though the scale gave way to some factors such as "individually guided professional development activities", "perceived need for professional development", "attributions for problems faced in teaching English" and "institutional professional development activities", it was not plausible to label these factors as they were since some of the items grouped under these factors did not lead to coherent sub-constructs. In the second version of the scale, we decided to omit some of these items, modified some, and add a totally new section with 13 reflective practice items. The second version then ended up consisting of 49 items. Currently, we have collected data from 286 different EFL teachers, and aim to reach at least 300 teachers. When PCA was run, total variance explained for 4 forced items was 54%. We hope to finish data collection soon, and present at the conference the final version of our scale.

At the end of this study, we hope to develop a scale with high validity and reliability in order to obtain data regarding EFL teachers' professional development activities in many aspects. The scale will also be culturally adapted, and applied in other European countries for cross-cultural comparisons. In addition, the scale will help gather evidenced-based data on EFL teachers' professional development regarding their current conditions and needs to convince the stakeholders in teacher education for any future improvements, revisions, and innovations in professional development practices and programs.

Situated cognition and teachers professional development: towards a continuous improvement model for teachers empowerment and competency development through workplace learning

Saeid Safaei Movahhed, Maryam Safaei Mozaffar, University of Tehran, Iran

Situated cognition contributes to a growing body of research in human sciences that explores the situated character of human understanding. It takes as its focus the relationship between learning and the social situations in which it occurs. Although this theory has changed our approach towards how learning happens and how training should be conducted, but its potential for professional development of teachers remains unexplored. Hence, this

study aims initially at arguing and justifying the implications of this theory for teachers' development in order to put forward a prescriptive model for that purpose. According to the related literature, situated cognition may denote the following implications for professional development of teachers: workplace authentic learning, continuous improvement, teachers' empowerment, and gradual competency development. Hence, the following model is prescribed to meet the aforementioned implications: Onboarding (when self-awareness and context awareness should be fostered among would-be teachers), Gradual Ascension (when amenable PDPs should be adopted to help teachers move from a novice actor to an expert practitioner), and Offboarding (when now expert teachers mainly focus on mentoring the new and devel-

oping teachers). This model deems professional development as a continuous improvement process which should cover the whole life cycle of a teacher, so Dryfus continuum of competence development (novice, advanced beginner, competent, professional, expert) underlies the developmental nature of the model as well. Additionally, various learning strategies are suggested at each level which focus mainly on authentic workplace contexts and consider learning as enculturation. Methodologically, the study may be deemed as theoretical inquiry as it aims at developing a new conceptual model for planning teacher education curricula. To gather data, the researcher focuses on years of experience in teacher education and receives input from other seasoned teacher educators to modify and develop the final version.

Sustainable Deelopment and an Implementation of Mentorship in Turkish Ministry of National Education

Esra Kaya, Anadolu University, Turkey; Kamuran Aydin, Ganime Özadam Primary School, Turkey

Sustainable development means development that meets the needs of the present without compromising the ability of future generations to meet their own needs. This definition was explained in the Brundtland report of the World Commission on Environment and Development in 1987. In 1992, the UN Environment and Development Conference in Rio de Jenario, Brazil was held. Some conventions like the Kyoto Protocol is based on the outputs of this conference. In September 2000, world leaders came together at United Nations Headquarters in New York to adopt the United Nations Millennium Declaration, committing their nations to a new global partnership to reduce extreme poverty and setting out a series of time-bound targets - with a deadline of 2015 - that have become known as the Millennium Development Goals. Second development goal is " achieve universal primary education". Turkey had made some efforts to reach this goal. In September 2015, The UN has set 17 new goals to be implemented by 2030. Fourth goal is "Quality Education". Ministry of National Education in Turkey has taken some steps to achieve this goal. One of these steps is mentoring beginning teachers. Mentoring is to support and encourage people to manage their own learning in order that they can maximise their potential, develop their skills and improve their performance. A successful mentoring relationship move through four stages. Initiation stage; mentor and mentee start their relationship, cultivation stage; mentor tell his/her experiences

to mentee, transformation stage; needs become fulfilled and objectives are met, and seperation or re-definition stage; the mentor and mentee close their relationship and redefine their relationship.

In Turkey, beginning teachers' lack of teaching experience has been a continuous argument. While studying in university, candidate teachers who didn't gain sufficient teaching experience had some problems after they were appointed as an intern teacher. In his/her school, manager assigned an experienced teacher for guiding the intern teacher. Their branch may not have been the same. To solve these problems Ministry of National Education started a new mentoring implementation for beginning teachers who are appointed in February, 2016. After this implementation, intern teachers are defined as candidate teachers and they have to pass candidate teacher process in a city and a school they choose before they start to teach in their own school. During this process, an experienced teacher who is the same branch with candidate teacher, guide them.

This study aims to reveal the problems both mentor and mentee lived during the process, the benefits of the implementation and how it can be more effective.According to results, candidate teachers generally benefit from the system. Mentors also have positive thoughts on the system. There were also deficiencies (non-payment for mentors, excess of documents) during the process. The length of the process is controversial among participants.

Addressing challenges through innovative practices: One school's story.

Carol O'Sullivan, Mary Immaculate College, Ireland.

Ball (2013) observes that the political process of rethinking education for the 21st century, related to real social needs and economic problems, will only come about by unleashing the innovative potential of schools, teachers and communities. Serdyukov (2017) also recognises the role of multiple stakeholders in the process of innovation to meet the challenges of "the fast-changing and unpredictable globalised world". The research contained within this presentation focuses upon how one school, using innovative and sustainable approaches, meets the challenges of teaching in a multicultural and multilingual context with attendant socio-economic problems. Using the school as an example, the presentation aims to reflect on the meaning of innovation and demonstrate its application in a practical manner.

This research, which is part of an Erasmus+ project, uses the Health Promoting Schools framework (WHO 1997, cited by HSE/DES/SHE 2013) to demonstrate the multidimensional process of effective innovation. This framework reflects the concept of shared responsibility as outlined in the curriculum for Social, Personal and Health Education in primary schools in Ireland (NCCA 1999). Each of the four key elements of the framework (Environment; Curriculum and Learning; Partnerships; Policy and Planning) influences and supports the other. Consequently the whole school is stronger and more robust as a result of this interlinked, comprehensive approach (HSE/DES/SHE 2013). The school represented in this ongoing research recognises the usefulness of this framework to help it to meet its many and varied needs both now and into the future.

A qualitative approach was taken in conducting this study. Using a series of focus group interviews, teachers were invited to identify how they addressed their daily challenges. The focus group methodology was chosen as this was seen to be the most effective way of engaging with this particular group and of observing the group dynamics. Denscombe (2003) observes that the term 'group' is the crucial feature of this methodology as "it tells us that those present during the interview will interact with one another and that the discussion will operate at the level of the group". Inductive analysis through coding was used to identify the key themes. This inductive approach "allows the theory to emerge from the data" (Strauss and Corbin 1998, cited by Thomas 2006). Strauss (1987, cited by Saldana 2009) views coding as key to proficiency at qualitative analysis. Emergent codes from the data were identified and subjected to critical reflection.

Findings indicated that a sense of community and common purpose, were key features of innovation in this school. Teachers highlighted the importance of effective and positive leadership, affirmation, parental and community involvement, CPD and opportunities for peer observation. They spoke about the importance of small acts of kindness and support from peers, parents and children. While this study took place in one school in Ireland, the issues highlighted by the teachers are seen to have international resonance. The examples of innovation could be replicated in many different schools. In addition, the Health Promoting Schools framework is recognised internationally. All of these features of the research serve to demonstrate its relevance to the theme of this conference.

Teacher-initiated Professional Development (PD) - a democratic and sustainable approach to PD

Richard Holme, University of Dundee, UK

Professional Development (PD) of teachers, and how they access learning, has been discussed and debated for many decades. In recent years, facilitated in part by technology, teachers appear to be taking greater personal responsibility, or ownership, for their own PD activity with examples of this including: TeachMeets or EdCamps, and use of social media (e.g. Twitter, FaceBook groups, blogs).

This research presentation is based on the results of a two-stage Delphi survey which investigated the potential phenomenon of teacher-initiated PD, and the factors and activities that associate with this form of teacher PD. The results of this study suggest this form of PD may be

more democratic, and less hierarchical, in nature with factors such as agency and trust being essential. Activities associated with this form of PD include collaboration, community and dialogue. The main conclusion is that a deeper, shared understanding of PD, teachers' motivations for engagement with this, is required, and this should begin with more open and transparent discussion and debate

Antecedents of University Teachers' Exhaustion, Engagement and Job Satisfaction: A Job Demands-Resources Model

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The job demands-resources (JD-R) model (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001) has become a leading model for research into job characteristics and employee well-being in the twenty-first century (Schaufeli & Taris, 2014). The model identifies two categories of job characteristics (job demands and job resources), and proposes two processes to predict employee well-being: a health impairment process leading to burnout and a motivational process leading to work engagement. In the past decade, literature using the JD-R model to predict school teachers' work engagement and well-being has grown (e.g., Bermejo-Toro, Prieto-Ursúa, & Hernández, 2016; Hakanen, Bakker, & Schaufeli, 2006). However, research on university teachers' well-being, framed by the JD-R model, has been underexplored.

This study tests the application of the job demands-resources model on university teachers in mainland China by investigating the relationship between the job characteristics of university teaching and teachers' well-being. The mediation effect of emotional exhaustion and work engagement and the effects of job demands and job resources on job satisfaction are tested. An online questionnaire survey was administered to 2758 teachers from 25 public institutions in Shandong province, East China.

The results of structural equation modelling suggest that job demands are detrimental to job satisfaction through emotional exhaustion, and job resources are beneficial to job satisfaction through work engagement. Emotional exhaustion and work engagement mediate the effects of job demands and job resources on job satisfaction, respectively.

The results of this study have implications for improving the international university teaching environment and the well-being of university teachers. First, teachers' perceptions of their working environment cannot be over-emphasised in understanding their attitudes toward work. Attention should be paid to distinguishing the different categories of job characteristics and balancing between the different types of job demands and the availability of university teachers' job resources at various levels. Second, efforts aimed at alleviating the perceived stress of university teaching may counteract emotional exhaustion and energy strain. Finally, interventions might increase the level of teachers' job satisfaction and promote a positive state of mind. Efforts should be based on equipping university teachers with practical strategies to regulate their attitudes towards work so they can be proactive rather than reactive.

Effects of Teaching-practice Experience on Teamwork Competency of Student Teachers

Takashi Yonezawa, Yuka Nakai, Yuto Yokouchi, Hiroshima University; Takashi Hayashi, Hiroshima University, Japan

The purpose of this study is to clarify effects of teaching-practice experience on teamwork competency of student teachers. Individual teachers are taken to each position and aim to achieve common educational targets for a certain period with cooperation and collaboration between teachers. The activities that individual teachers in a team deal with can be classified into two types: task-work that is an activity the task itself requires and team-

work that is an interpersonal activity such as exchange of information and mutual support with other members (Morgan, Salas, & Glickman, 1993 Aikawa et al., 2012). The individual competency for implementing teamwork varies among different individuals as well as that for taskwork (Aikawa et al., 2-12). As OECD DeSeCo project advocated, the importance of teamwork competency is noted internationally. Even in Japan, teamwork competency is required for teachers and it is demanded to foster the competency from training stage.

However, there are few studies that examine development of teamwork competency of student teachers on teaching-practice in teacher training stages. What opportunities student teachers can improve their teamwork competency in the stage? Given individual teamwork competency is improved through a team activity experience, teaching-practice can be a potential opportunity. Teaching-practices of national teacher training universities and faculties are carried out at university attached schools and trainees work in team (teaching-practice group) between 5 and 6 people. Taking these things above into consideration, it can be presumed that the experience in teaching-practice group during teaching-practice period has effects on teamwork competency of student teachers.

Thus, we conducted a retrospective method questionnaire survey to clarify effects of experience in teaching-practice group on teamwork competency. The experience in teaching-practice group consists of co-operation experiences in formal setting, experiences in informal settings, experiences of negative expression, sharing experiences of opinions, and self-dependence experiences (Mishima et al., 2011). The teamwork competency consists of communication, team orientation, back up, monitoring, and leadership (Aikawa et al., 2012). For ethical considerations, we conducted our survey targeting at only those who provided their consent and permission after our explanation of its concept and method with making sure they are completely free from the physical and mental burden or disbenefit. And we gave each participant examinee number for their privacy protection.

The result of this research demonstrates a previously unconsidered effects of teaching-practice experience on teamwork competency of student teachers and has an effective as a basic resource in consideration about the modality of teaching-practice.

Educating for critical, sustainable learning in early years – policy expectations and practical deliberations among Swedish preschool teachers

Johan Liljestrand, University of Gävle, Sweden

In Sweden the national syllabus of the preschool is among other things characterised by ambivalences – such as being both child- and subject centred, taking the initiatives of the child as point of departure and simultaneously the subject goals for science, and as being defined as both autonomous and aiming prepare for primary school. Although such goals mirrors political tensions within international early childhood policy – i.e. current schoolification of a child-centred tradition – a conscious integration of child and subject focussed curricula (cf. Dewey 1902) beyond the compromises in educational policy, could be seen as a necessary for educating critical learners and citizens, in a democratic and sustainable society. In this paper, the author attempt to shed light on how the professional guidance of children could support their inquiry and strengthen the child as a critical learner of subject knowledge. The purpose of the paper is to analyse preschool teachers' professional reasoning in the context of conflicting national policy expectations, and to provide a reconstruction of a child-and-subject centered curricula, based on the implicit insights visible in research-preschool teacher conversations.

In this paper, professional reasoning is approached from the perspective of teachers as social actors in everyday life, shaped by but also re-shaping, the policy context(s) of the preschool. Discourse analysis will be used an analytic tool, focusing on how everyday discourse people borrows from cultural repertoires stemming from a culture's common-sense way of talking (Potter & Wetherell 1987). The reasoning of the preschool teachers will further analyzed in relation to the policy context foremost formulated on state- and municipal level during the conversation with the preschool teachers. In order to address complexities of professional reasoning, qualitative interviews performed in the environment of the preschools were done. 10 preschool teachers participated (approximately 50 minutes each). In order to approach teachers' everyday reasoning the interviews were designed as semi-structured conversations between the preschool teachers and me as a teacher educator and researcher,

explicitly asking for access with the professional field. The preschool teachers were informed about the project including their rights regarding participation, anonymization and proper storing of the data.

Tension-filled talk emerged in the interviews, e.g. between children's perspective vs subject content and as the autonomy vs schoolification of the preschool, that obviously mirrors tensions in the national policy. However, the interviews also contains material for an integrated child-and-subject focused curricula: between children's interests and national learning goals; through balanc-ing between offering and pushing children's learning; between child-centeredness and school preparation; between viewing the child as competent and in need of support for achieving learning goals. The ways in which preschool teachers creatively handled these tensions will be clarified and preliminary reconstructed as a tool aimed for preschool teacher education. A deeper understanding of the professional mission of integrating child- and subject-focussed curricula is important for teacher education and for sustainable learning into critical citizenship.

Effects of Teamwork Competency of Teachers on Their Educational Activities

Yuto Yokouchi, Takashi Yonezawa, Yuka Nakai, Takashi Hayashi, Hiroshima University, Japan

The purpose of the present study is to clarify effects of teamwork competency of teachers on their educational activities.At today's school sites, working with a team on issues becoming more and more complex and diverse is required. Needless to say, teachers cannot conduct their educational activities individually, but they take to each position and conduct them in team with cooperation and collaboration (interdependence and interaction) with other members. The activities that individual teachers in a team deal with can be classified into two types: taskwork that is an activity the task itself requires and teamwork that is an interpersonal activity such as exchange of information and mutual support with other members (Morgan, Salas, & Glickman, 1993 Aikawa et al., 2012). As OECD DeSeCo project advocated, the importance of teamwork competency is noted internationally. Even in Japan, teamwork competency is required for teachers to response to future educational development and issues schools are facing. (MEXT, 2012; 2015). However, previous studies have focused on effects of taskwork competency of teachers on their educational activities. There are few studies that examine that of teamwork competency of teachers on their educational activities. Thus, we conducted a questionnaire survey to clarify effects of teamwork competency on educational activities. The teamwork competency consists of communication, team orientation, back up, monitoring, and leadership (Aikawa, 2012). The educational activities consist of learning guidance, student guidance, educational counseling, general administrative work, school management work, cooperation work with parents. For ethical considerations, we conducted our survey targeting at only those who provided their consent and permission after our explanation of its concept and method with making sure they are completely free from the physical and mental burden or disbenefit. And we gave each participant examinee number for their privacy protection. The result of this research demonstrates a previously unconsidered effects of teamwork competency of teachers on educational activities and has an impact as a basic resource in consideration about the modality of teamwork in educational activities.

Professional Socialization of Turkish and Polish English Teachers in their Initial Years of Teaching

Muzeyyen Nazli Güngör, Gazi University, Turkey; Sumru Akcan, Boğaziçi University, Turkey; Dorota Werbinska, Pomeranian University, Poland; Malgorzata Ekiert, Pomeranian Universit, Poland

This cross-cultural exploratory study investigates the Turkish and Polish novice English teachers' struggles, emotions and coping strategies with professional challenges, and examines how these teachers' professional identities are influenced by contexts during their initial years of teaching. The aim is to draw on novice teachers' reflections about emotions, experiences, challenges, and coping strategies so as to reconceptualise their emerging professional identities with the use of critical incidents as a data collection and reflection tool. Identity has been viewed as how a person understands his or her relationship to the world, how that relationship is constructed across time and space, and how the person understands possibilities for the future. Considering the emotions and coping strategies of novice teachers from Turkey and Poland, it can be claimed that the challenges they experience in the classroom bring about authentic coping strategies, which helps teachers engage in "identity work" (Nichols, Schultz, Bilica, 2017).

The participants were thirty-four novice English language teachers (23 Turkish and 11 Polish) working with K-12 learners in culturally, socially, economically and his-torically diverse regions of Turkey and Poland. The data for the study were collected simultaneously in both countries during three months in the spring term of 2016-17 academic year. They were generated from two sources: 1) critical incidents of novice teachers, and 2) online and/or oral interviews with these teachers, which was followed by a comprehensive cyclical data analysis. The positive and negative experiences related to classroom management, teaching practices, learning issues, teacher incompetency and L1-L2 use shaped novice language teachers' identities in this study. The findings suggest that creating interactive and reflective learning contexts for the novice teachers will help them easier adapt to their new school settings and better establish their professional identities. Through encouraging systematic reflection on their experiences, novice teachers improved their understanding on diverse issues which they had encountered in the early years of teaching. The critical incidents, which feature the coping strategies and alternative ways to turn a negative incident into a positive outcome, can be suggested as part of the practicum component in pre-service language teacher education programmes.

Documentation between local professionalism and accountability – a case from the Swedish preschool

Annika Elm, Johan Liljestrand, University of Gävle, Sweden

Documentation of pedagogical practise has become a vibrant issue through its relationship with educational policy- and government in many national contexts. Documentation is also regularly used as a tool for local, collegial development, not neces sarily driven by the external demands for accounting educational outcomes. Against this background, the practise of documentation could be related to different modes of teacher professionalism; outside-in-professionalism, characterized by teachers as responding to external and standardized demands, and inside-out-professionalism characterized by teachers as responding to complexity and change, through qualified judgment.

Although documentation is regularly employed as a tool for local, collegial development, the responsibility for documentation commissioned by educational authorities remains an assignment, coming with consequences for how to relate this self-initiated local documentation to the demands of the educational authorities. The purpose of this presentation is to investigate the tension, between documentation based in inside-out-professionalism and outside-in-professionalism, by means of a case study from the Swedish preschool. Our research questions reads: how do external demands of documentation impact on the collegial conditions of documenting practise? How do professional conditions of documenting impact on the

external demands of documentation?

Our analytical point of departure proceeds from the assumption that documentation is shaped from certain positions, interests and perspectives (Vallberg Roth 2012), including the crossing between different interests and logics within educational institutions. A qualitative case study of one preschool setting in which a long term documentation has been performed, using CoRe (pedagogical content representation) has been adapted as an approach for teaching science, in a practice based research collaboration project, will be related to intentions from the municipality. The gathering of data includes participant observations in preschool and interviews with participating preschool teachers, at municipal briefings, interviews with responsible parties representing the local preschool as educational agency, and by collection of documents.

The expected outcomes of our study indicate that preschool teachers are acting between norms of designing documentation from their professional and local interests and that of adapting to the interests of the educational agencies. The first norm is based in their collegial self-defined needs (in collaboration with the researchers) for teaching science in preschool, mainly by teaching science and technology themes, paying attention to preschool children's responses to science and technology content. The second norm is characterised by accounting for national goals in the national syllabus, in ways corresponding with the national school system. The preschool teachers respond to this latter assignment through (professional) deliberations, aiming to deliver material from their everyday work to the agency, while simultaneously keeping the integrity of their own work as separated from the assignment of the agency. These local deliberations and decisions will further be analysed in terms of the dynamic between the two modes of professionalism mentioned above, in light of the local policy context. Our project shed light on conditions shared with several European countries regarding possibilities for sustainable teacher development within broader contexts of demands for accountability impact on teachers' professional work.

Online Reflection and Feedback on Teacher Agency: A Practice with Pre-service Language Teachers

Derya Yayli, Demet Yayli, Pamukkale university, Turkey

Teacher agency has attracted a lot of attention and interest in recent teacher education research as teachers are expected to be agents of change in their communities of practice. However, agency development research focusing on teachers of different subjects and of levels is still scarce. Thus this qualitative study aims to trace the trajectories of pre-service teachers' agency development during practicum in a Turkish setting. It also aims at describing the role of online reflection and feedback on practice of potential language teachers.

The participants of the study are 16 pre-service teachers, 10 enrolled in in English Language Teaching (ELT) program and 6 in Turkish Language Teaching (TLT) program. The framework for the study was formed in the light of the categories of teacher tensions as proposed by Pillen, Beijaard, and den Brok (2013). As tensions are fruitful sources for agency development in both pre-service and in-service teacher education processes (Yayli, 2017), such a framework was adopted for this study. In their study, Pillen et al categorized tensions under the headings of 1) The change in role from student to teacher, 2) Conflicts between desired and actual support given to students, and 3) Conflicting conceptions of learning to teach. Thus the research tools for the present study were designed accordingly.

Preliminary data were collected through semi-structured interviews. The interview questions were prepared in line with the categories of Pillen et al (2013) study. An online platform for reflection and feedback was established through an online application. Each participant is making their weekly entries onto a shared document. In their entries they reflect on their teaching experiences, give feedback to their colleagues and have a chance to exchange ideas in developing agency in the midst of crises. The online part of the study is going to last 14 weeks. At the end of the 14 week period, each participant will be interviewed again to collect the final views. Finally a focus group interview will be held with all participants together. As the study is still in progress, the qualitative data from the data collection tools will be analyzed after the transcription of the interviews. The codes and themes will be determined to comment on the data within the aforementioned framework. An inter-rater reliability will be achieved through multiple raters. The findings will be discussed in detail and implications will be made in order to provide practical knowledge for practice and future research in other parts of the world.

Mentor Support to Pre-service Teachers on Theory-Practice Dichotomy in Schools: An Online Practice

Deraya Yalyi, Pamukkale university, Turkey

Teacher education research has long focused on theory-practice gap that practitioners suffer from in their teaching institutions (Allen & Wright, 2014). The theoretical knowledge pre-service teachers learn during undergraduate studies and the practical knowledge they receive during practicum often contradict (Allen & Wright, Korthagen, 2010; Zeichner, 2010). Therefore many pre-service teachers have difficulty in making decisions about which knowledge to follow. They solve their problems through using some individual strategies, consulting the mentor teachers and peers, and so on. Asking for help is a common strategy for novice teachers and they frequently ask their mentors for instant help (Yayli, 2017). The quality of the mentor feedback could have significant role in novice teacher induction and teacher identity development. Thus this study aims to investigate the traces of theory-practice dichotomy and the quality of mentor support in the stances and feedback of pre-service teachers through online interaction.

The participants of the study are 14 pre-service teachers of Turkish Language and Literature enrolled in a certificate program in a Turkish university. Preliminary data were collected through semi-structured interviews. An online platform for reflection and feedback was established with the help of an online application. Each participant is making weekly entries onto a shared document. In their entries they report and reflect on their theory-practice gaps they experience, give feedback to their colleagues and exchange ideas about the dichotomy and the mentor support they receive. The online part of the study is going to last 14 weeks. At the end of the 14 week period, participants will be interviewed individually and as a focus group. The study is in progress. The qualitative data will be analyzed and findings will be discussed with reference to the literature. The codes from the content analysis will be connected with potential themes. The inter-rater reliability of the codes and themes will be accomplished through support from another researcher from the field. The quality of the mentor support on the theory-practice gap and pre-service teachers' progress about the dichotomy will be discussed

The Future Teachers' Attitudes on Intercultural Education

Marija Sablić, Alma Škugor, University of Osijek, Croatia

This research focuses on establishing intercultural competence and basic knowledge in the field of interculturalism among third year students of the teacher training study programmes. It aims at establishing the level of the knowledge of features fundamental to interculturalism (concept, goals, values), desirable intercultural competence required for future teachers to work in culturally diverse classes, and at finding out to what extent intercultural education contributes to the development of certain students' competences. The research involved a total of 135 students of the third year of study. The majority of students are female (N = 126 i.e. 93 %). As regards the type of faculty, the majority of students study at the Faculty of Education (future class teachers) (N = 93), and 42 students studying at the Faculty of Humanities and Social Sciences in Osijek (the students of double-major study programme of Pedagogy and Croatian language, and English language and History). For the research purposes, the questionnaire by Piršl, Benjak and Diković (2009) was used. Prior to their enrolment to the Faculty of Education, the majority of the students have been introduced to the notion of interculturalism, mainly through media, but there is a considerable number of students who have been introduced to interculturalism while working in NGOs. According to students' responses, the fundamental concepts determining interculturalism are respect and acceptance of diversity, active co-operation of two or more cultures in all spheres of life. The statements that best determine the goal of interculturalism according to the opinion of students are fostering the feeling

of solidarity with culturally different members of the society, developing the ability to understand and accept cultural differences as core values as well as developing communication skills with culturally different members of the society. Students estimate that the most important values that intercultural education should promote are tolerance towards culturally different, coexistence of different cultures and equality of all people, as well as the suppression of stereotypes and prejudices. When it comes to the number of interculturally sensitive students, the research results show that students demonstrate a high degree of ethno-relativism, which suggests that future teachers possess the ability to observe the world with the eyes of people of culturally different backgrounds, taking their perspective into account, adapting their identity and developing fundamental intercultural competences. Students consider that the most important competences for the work of teachers in cultural and pluralistic environments are communicative skills and intercultural sensitivity. Moreover, they consider that intercultural education in the course of the studies contributes to developing particular competences such as openness to different cultures, understanding key concepts of interculturalism, communication skills and critical thinking. The research results point to the importance of training young people for working in the educational process based on acceptance of diversity and respect for cultural pluralism, democracy and fundamental human rights.

Understanding the Z Generation Learner to Promote Effective Contemporary Teaching in Nigerian Universities

Chinyere A. Nwajiuba, Robert U. Onyeneke, Florence E. Ota, Celestina A.Nweze Federal University NDUFU, Nigeria

In a world that is changing so rapidly, and in so many ways, it becomes a challenge to envision how contemporary lecturers promote learning and teaching to prepare the new generation of learners known as the Z generation for the world of work. Developing the 21st century skills demand that contemporary university lecturers consider the dispositions and needs of their students, especially the new generation student. An understanding of the different learning styles of the Z generation students is likely to help teachers develop appropriate teaching strategies to improve students' learning experiences in Nigerian universities. The study, thus, used cross-sectional data gathered from 132 randomly selected undregraduate students of private and public universities to analyze the learning style, teaching and assessment methods preferences of the Z generation students in Nigerian Universities. Using descriptive and inferential statistics, the study identified four important learning styles – visual, auditory, tactile and social interpersonal learning styles – among the students. The common teaching methods are lectures, class discussion, demonstrations and use of ICT facilities. The preferred assessment methods include written, oral, computerized, and exam-bound methods. This analysis provides contemporary lecturers the much-needed knowledge on the different learning styles, teaching and assessments methods preferred by students in order to foster an optimal learning environment for the Z generation students.

Redesigning the teaching profession: a road map for teacher careers, teacher development and teacher policies

Marco Snoek, Amsterdam University, Netherlands

In most countries, the teaching profession is a rather flat profession. The recent Eurydice report on teaching careers (European Commission/EACEA/Eurydice, 2018) shows that in most countries there are limited career opportunities. Such opportunities mostly refer to changes from teacher to head teacher or school head. This raises the question for many young (student) teachers whether they will be doing the same task for 40 years, a perspective which is not very appealing to them. The Eurydice report also shows that there is hardly any career guidance for teachers in Europe, through which teachers are supported in developing their career.

This lack of career opportunities is the result of a rather limited understanding of the teaching profession where the core of the profession takes place within the classroom where isolated and individual teachers work with pupils/students. In this mindframe, teachers are seen as routine professionals who deliver the curriculum and whose main competences refer to competences regarding teaching, learning and the subject. However, when we understand teachers as adaptive professionals (Darling-Hammond & Bransford), they need additional competences regarding reflection, inquiry, innovation and leadership. Such competences are covered only to a limited extent within the curriculum of initial teacher education and needs to be (further) developed during the career.

In the Netherlands a discussion has started on the teaching profession, emphasizing different aspects of the work of teachers: Supporting the learning of pupils, developing teaching and learning, organizing teaching and learning and supporting the learning of colleagues. In each of these aspects teachers will need different competences and teachers can growth from student to novice to experienced to master/expert. This simple model (Snoek, de Wit, Dengerink, van der Wolk, van Eldik & Wirtz, 2017) has triggered many discussions in Dutch schools and teacher education institutions on the possible implications of the model. This can apply to different stakeholders: For teachers it provides a road map which they can use to map and plan their career ambitions: where do I want to be after 5 years and what steps do I have to take? ; For school heads and (local) authorities it provides a framework to discuss what opportunities are available in their school and to what extent they want to stimulate roles outside the school to keep the teaching profession attractive for their teachers. It also can help to analyse what support structures the school provides to master the competences that are needed in new roles; For teacher education institutions it provides food for thought regarding the way universities offer in-service opportunities to develop specialized competences that are not covered within the ITE curriculum. It can also help to attract potential student teachers to teacher education as it shows a varied and attractive profession.

Participation and active citizenship as the key aspects of education for sustainable development

Ruzanna Muradyan, Mrs.

The present article focuses on key aspects of education and sustainable development: the idea of lifelong education, the different processes of learning and challenges of participation and environmentally responsible behavior. Participation and active citizenship are among the central issues of education for sustainable development and especially social sustainability. The main objective for the participation and environmental education is to empower people to be environmentally responsible people.

Without the effectiveness of the education for sustainable development, this goal cannot be reached. The examination of the past clearly indicates that nowadays it is not possible to predict precisely what kind of knowledge and skills will be required in the future. This is clearly demonstrated by the globalisation process: the earlier models of international cooperation and relations do not help us understand the present reality, and clearly do not predict the future to come(Gerber, 2001).Determined by

our unfamiliarity with the future, the concept of lifelong education should include other components in addition to content and methodological advice. These issues are related to the concept of learning in general: how to learn and how the learned knowledge is related and given individual significance on behalf of the learner and in the wider community. Lifelong learning is essentially related to the notions that learned knowledge can be applied and transferred into altering contexts in different situations in varying times and areas. At the contextual level, the objective of teaching is related to the improvement of a pupil's own activism and influence over her/his actions in a constructive way. The contextual approach is well founded also because the contents to be learned are linked to the pupils' life-world and motivates all the more and will also decrease the restlessness in the setting where the learning takes place.

In fact, promotion of effective learning and strength-ening the students' environmental responsibility and empowerment are difficult goals. It is much easier to teach knowledge-based pieces of information and even have an effect on students' attitudes than promote empowerment. There are no tricks for creating and increasing participation and active citizenship. However, much can be done if the school teaching is more and more related to students' everyday life and if the student's own experiences are taken into account.It is also important that learning should relate to current issues of both global and local environment and to the perspectives of young people. To conclude, I would like to state that the idea of responsibility is the main challenge within active citizenship. An environmentally responsible citizen should regard himself/herself as part of the nature and society, is concious of environmental values and is able to present them, understand how the nature and society operates, and acts responsibly as an individual and member of the community.

An Exploration into EFL Teacher Beliefs about Teacher Autonomy: Turkish State University Context

Cemile Buğra, Neslihan Gündoğdu, Çukurova University, Turkey

The aim of this research is to explore the beliefs of EFL teachers about teacher autonomy through the eyes of teachers in a state university in Turkey. Professional teacher development is a really significant issue in a teacher's career. Teachers are the real practitioners and that is why they should keep track of their practices and its outcomes to be able to evaluate the process and decide on their further actions. Hence, they need to become autonomous teachers who can create opportunities for themselves and their students to be more self-regulated. In the literature there exist a number of definitions on teacher autonomy. However, it is argued whether EFL teachers are aware of its definitions, functions and importance in EFL teaching and learning. This research will seek out the answers to what EFL teachers know about teacher autonomy, how they define it, whether they have had any practices in their teaching career so far or not and what assumptions are underlying behind their practices. This research also will focus on whether there is a relationship between teachers' knowledge about teacher autonomy and their personalities, educational background and the length of their work experience. The participants of this study will be ten EFL instructors who are teaching prep classes. The data will be collected through three steps. First, demographical information will be gathered. And then semi-structured interviews will be held. Finally, focus group interview will be conducted to discuss the prior findings gathered from the interviews for circulation. The findings and implications of this study will shed light on the further studies. The results of this research will be shared and discussed with the participant teacher researchers in the conference. Without understanding teacher beliefs today, it may not be possible to construct the future in EFL teaching and learning. So, building tomorrow is in the hands of today's professional teachers.

Analysing Pre-service Teachers' Collaborative Development from Activity Theory Perspective: the Emergence of 3R Model

Muzeyyen Nazli Gungor, Mustafa Akin Gungor, Gazi University, Turkey

Activity theory, first stated by Leont'ev (1978) and then extended by others from Vygotsky's sociocultural perspective (Engestrom, 1999; Lantolf & Thorn, 2006), tries to build the link between the individual teacher development and broader social, cultural, and historical macro-structures that shape the development. These macro structures are educational reform policies, curricular mandates, assessment practices, and norms of schooling that shape the ways second language teachers enact their teaching practices, and the environment they create for learners. Drawing support from collaborative teacher development, sociocultural theory, and Engestrom's (1999) activity theory model, the aim of this study is to understand how the macro structures in an English as a foreign language context shape the teaching practices and growth of pre-service teachers as practitioners of learners aged 7-12. The premise is to think about the ways in which practices in teaching English at pre-service level might be transformed into second language teacher education context in terms of reflective and collaborative development. The participants were thirty-four 3rd year non-native pre-service teachers in one of the largest teacher training state universities in Ankara, Turkey. The data were generated and triangulated from these sources: video-recordings of

microteaching sessions, bi-weekly reflective journals, lesson plans, classroom observations and peer and individual feedback upon each microteaching presentation throughout the 2015-2016 academic year. The data analysis was made through constant comparison method based on the Grounded Theory (Glaser & Strauss, 1967), which then led to the establishment of a new model for PSTs' growth in a spiralling process of reflection based on the activity theory framework. The emerging themes are (a) the transformation of data collection tools into collaborative teacher development tools in PSTE, and (b) the emergence of 3R (research, rehearsal, and reflection) model for collaborative teacher development at pre-service level. Results suggest that finding new grounds for pedagogical practice will depend on the critical perspectives on the societal practices in which we participate, and on our own social-individual basis to enact and reflect on the problems and conflicts to be resolved. Hence, recognising the complexities of classroom life in public schools, the components of national and international norms of schooling, and teacher education settings is necessary to understand how the smallest activity system shape and is shaped by the macrostructures or rules.

Critical incidents shaping professional identity of master-degree students at two teacher education institutions in Finland and Israel

Olzan Goldstein, Kaye Academic College of Education, Israel; Eero Ropo, University of Tampere, Finland

The research examined critical incidents and their implications in teaching practices and professional identity of master-degree student-teachers and teachers in Finland and Israel. A critical incident is an event having a meaningful impact on the teachers' cognitive and emotional state as well as on their professional identity (Panadero & Monereo, 2013). Professional identity (PI) is defined as "how teachers define themselves to themselves and

others. It is a construct of professional self that evolves over career stages and can be shaped by school, reform, and political contexts" (Lasky, 2005). The PI of teachers constantly evolves through a narrative process built upon experiences as a teacher (Yrjänäinen & Ropo, 2013). A reflective analysis of critical incidents and their implications can promote professional development of teachers. The research is grounded in the qualitative phenomeno-

graphic approach. The student-teachers from Finland (N=30) and in-service teachers from Israel (N=23) studied in the master-degree programs took part in the research. The data was collected by written essays where students shared their critical incidents in teaching (cases of success and failure) and described an impact the incidents had on their PI. They also asked to relate to advantages and challenges of the education systems in their countries. A preliminary analysis of critical incidents revealed several categories: teaching style, teacher-students relationships, cultural differences and social and emotional aspects of teaching. Teaching styles in successful incidents character-ized as using diverse methods, active learning, promoting thinking and discussion, and adjusting teaching style

to students' learning styles. In contrary, in unsuccessful incidents boring, monotonous teaching, passive learn-ing, and a mismatch between teaching and learning styles were mentioned. Teacher-student relationships in successful incidents were described as supporting, caring and empathetical while unsuccessful incidents related to misunderstanding and lack of awareness about students' background situation.

Different countries develop different approaches to education and teacher education. Comparison between teachers' PI and factors influencing them can help to un-derstand advantages and challenges of teacher education in different countries.

Teacher resilience and professionalism in adverse contexts: Findings from a study carried out in Portugal

Maria Assunção Flores, University of Minho, Portugal

Over the last fifteen years or so, resilience has emerged as a field of research, not only in countries that experience high rates of attrition, but also in contexts in which the teaching profession has gone through policy and social changing circumstances affecting its social and econom-ic status. This paper presents data from a wider funded research project aimed at examining existing conditions for teacher leadership and professional development in challenging circumstances. A mixed-method research de-sign was devised. The project included a national survey in which 2702 teachers participated (phase I); semi-struc-tured interviews to principals in 11 schools located in different regions of the country; focus group to 99 teachers and focus group to 108 students (phase II) and a

professional development programme in 5 schools located in northern Portugal, in which 66 teachers participated (phase III). Findings highlight teachers' strong profession-al values, their sense of professionalism and their capacity for resisting and for being resilient (despite negative policy environment) as well as their sense of identity as teachers emerged from the data in explaining teacher resilience. The relational and affective dimension of teaching was highlighted in teachers' accounts and it was of para-mount importance as a key source of motivation (despite the external factors leading to lack of motivation such as lack of career prospects, salary cuts, worsening of work-ing conditions and unemployment), resilience and hope in teaching.

An investigation into teachers views of professional standards

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Existing literature suggests that standards may be seen both as a way to improve the teaching profession and to control teachers' practice. Issues such as external regula-tions, compliance, government imposition, and accounta-bility are often associated with the definition of standards.

On the other hand, improving the teaching profession, self- regulation, activism, and definition of standards of professional practice from within the profession are also identified in the literature. There has been much debate about the ways in which professional standards are used

to advance teacher quality and professionalism through means of development or compliance (Sachs, 2003; Smith 2005; Day 2004). Existing literature also points to the uncritical use of professional teaching standards. Sachs (2003) identifies three main ideas: i) standards as commonsense – as a basis for providing a benchmarking of minimum levels of achievement; ii) standards as quality assurance – as a degree or assessment of quality; iii) standards as quality improvement – within the context of teachers' professional development and learning. The goal of this paper is to examine recent trends and findings from research on professional standards and their contribution to teacher professional development. This paper reports on findings from a study conducted in Portugal. The aims of the research project were: How do teachers look at the professional standards in different phases of their careers? How do they make sense of standards in relation to the professional development? How do teachers value the various dimensions of their work? What are the factors that hinder or facilitate their professional development?

Data were collected through a questionnaire with teachers from pre-school to secondary school between 20th September and 20th December 2016. In total, 1307 teachers participated. Findings suggest a number of convergences and divergences in teachers' views of the standards. Some of them are against the use of standards as they see them within a logic of control of their work. They are critical of the ways they have been defined and implemented (according to a top-down perspective) and they stress the lack of debate in schools about the use of standards and the need to pay attention to the context. Other teachers see them as a way of enhancing teacher professionalism and professional dialogue. The majority of them agree with the use of standards for improving their practice and for professional development purposes but they reject their use to make managerial decisions. These and other issues will be discussed further in the paper.

Teacher Epistemological Beliefs and Sustainable Change in Professional Development

John O´Dwyer, Bilkent University, Turkey

The aim of this phenemenological interpretative study is to follow the epistemological beliefs of a group of newly hired teachers during a year-long in-service training programme in a language teaching context. The research questions are as follows: What are the general and language learning related personal epistemologies of English language instructors when new to an institutional context and on a formal, structured induction course? And how do their personal belief-related perceptions change over time in the new context, if at all? The theoretical framework was developed from Schommer (1990), who posited five factors comprising 12 subsets, to research epistemological beliefs in science and reading. Contrary to Perry (1970), Schommer argued that the development of epistemological beliefs was not linear but might be complex in one area but naïve in another. A hermeneutical analytical framework (Robinson & Kerr, 2015) is used, along with Creswell's (2007) case-study analysis template, Lave and Wenger's (1991) professional situated learning framework, and Woods' (1996) Hotspots. Five subjects from a cohort of 22 teachers on the in-service course had their beliefs categorised based on Schommer's five factors. Data

collection included classroom observations (with pre-and post-meetings), one-on-one semi-structured interviews, reflective journals, and course related documentation. Professed, enacted and implicit beliefs were interpreted by the emic researcher at three separate stages over the duration of the in-service course, with follow-up in year 2.

The paper charts the development of the beliefs of the selected subjects, referenced to Schommer's categories, how beliefs changed over the stages of the formal in-service course as it progressed, and the relationship between professed, enacted and implicit beliefs in the context under study. Beliefs formed from life, or through teacher education and classroom experience, may positively impact teaching effectiveness or may hinder progress in adopting more effective ways of doing. If beliefs rather than trained knowledge are instrumental in how teachers organise effective student learning, then understanding the nature of those beliefs, how they influence classroom practice, and how susceptible those beliefs are to change, will be key in deciding approaches to teacher education and learning across multinational groups and international contexts.

Implementing Education for Sustainable Development and Pedagogical Challenges

Cresantus Biamba, University of Gävle, Sweden

ESD has a transformational role since it aims at encouraging the transformation of education and reorientation of societies in order to reach sustainable development (UNESCO, 2014). Teaching and learning for ESD are encouraged to promote critical thinking, to imagine the future and make decisions in order to empower learners to take action towards building a sustainable society. Pedagogy makes the connection between teaching and learning and is therefore crucial for education's contribution to sustainable development. This paper examines pedagogical approaches that promote sustainability and how teachers might be empowered to improve pedagogic practice for diverse learners and in challenging context. It explores pedagogical contents of ESD, and the pedagogical challenges educators face when the ESD paradigm is put into practice particularly across different disciplines in the context of teacher education in a developing country. The methods employed included documentary analysis, interviews and observation. The findings are based on interviews with student teachers after their teaching practice placement, as well documentary evidence. The paper also suggests ways in which educators can address difficulties when trying to infuse the ESD paradigm into teacher education programmes.

Student Teachers' Views on the Value of Research for Educational Practice: a Comparative Study

Marta Kowalczuk-Waledciak, University of Bialystok, Poland

Developing teachers as researchers and teaching as a research-based profession continues to be a priority in European and national debates on increasing the quality of teaching and teachers. While there is a plethora of discussions on how to improve teacher education curricula to boost (future) teachers' capacity to adopt research-based approaches in their workplaces (e.g., Byman et al., 2009; Flores et al., 2016; Linden et al., 2015), relatively little is known about how student teachers themselves perceive the value of educational research for teaching practice. Furthermore, the majority of the available studies have been conducted within national contexts (e.g., Ion and Iucu, 2016; Byman et al., 2009); international studies still remain to be quite rare. This paper reports on findings from a study aimed at exploring (1) how MA student teachers from five European countries (Poland, Romania, Portugal, England and Latvia) perceive the value of research for educational practice; and 2) how they intend to use and do research in their (future) workplace settings.

The study draws upon a broader investigation into master's students in the field of education carried out in Poland, Portugal, Latvia, England, and Romania. The leading goal of this research is to explore students' views on the usefulness of a master's degree in education and master's degree diploma work for educational practice. Findings that will be presented in this paper only refer to student teachers (N=463) involved in several different master's programmes (aimed at initial or continuing professional development) in higher education institutions in Poland, Romania, Latvia, England and Portugal.

Data was collected through a questionnaire (both on-line and a printed version) including 29 items organized around four sections related to: (1) background; (2) experiences of master's degree programme in general; (3) experiences of the completion of the dissertation/thesis; and (4) suggestions for improving the quality of master's programme. In this paper, selected questions (six out of the fourteen) from the second part of the questionnaire are considered. Descriptive and inferential statistics will be obtained for the quantitative data. The answers to open-ended questions will be analyzed thematically, using qualitative methods.

The preliminary results of this cross-national study suggest that although most of the surveyed MA student teachers from all the considered countries agreed that doing and using research can contribute to teaching practice in general, they sounded less convincing when expressing their intention to use research findings in their (future)

practice, and were even less certain about doing research in their (future) workplace settings. The final results will be scrutinized for differences and similarities across national contexts as well as student teachers' age, gender, type of master's course, and professional work experience. The implications of the main results will be discussed in the context of prospects and challenges of research-based teacher education.

Transforming Lives: paraprofessionals as an unrealised potential for teacher recruitment

Hilary Smith & Viki Bennett-Kane, Bath Spa University, UK

This paper proposes a possible perspective on teacher recruitment which arises from research into the educational and professional outcomes of teaching assistants (TAs) who have undertaken higher education (HE) work-based learning on Foundation degrees (FdAs), in three English universities. The participant graduate TAs who took part in this research are predominantly mature women from a low socio-economic, non-traditional HE background and as such are an under-represented group in teacher education. The participants, paraprofessionals employed for student support in educational contexts, are shown to have the attributes and skill sets which can offer a unique contribution to the teaching profession.

The Transforming Lives research is underpinned by the theoretical framework of reflexivity (Archer, 2008) which allows consideration of internal dialogue to explore an individual's actions and concerns. Interview data from the participants shows that they tend to engage in forms of reflexivity which result in a strong dedication to family and immediate community and a high level of commitment to vocational improvement with a view to social transformation. Given that the findings show that these TAs grow in confidence following HE study and often remain in their social contexts, their view of children and of their own associated pedagogical choices is worthy of scrutiny.

A qualitative research approach was employed and extended semi-structured individual face to face, Skype or telephone interviews with 21 participants took place. Data analysis shows participants' increased confidence in applying educational theory to classroom practice. Participant responses also indicate that their HE studies had opened their eyes to the multifaceted nature of learning, and had altered their view of the child from that of a recipient of a linear predetermined curriculum to that of a competent learner, connected to the world. Participants bring lived experience to their studies and practice, and those that go on to qualify as teachers are well placed to bridge the domains between the craft worker, competent technician and crucially, the critically reflective practitioner (Winch et al, 2015).Consequently, this paper suggests that, in the current teacher recruitment crisis, TAs as graduates offer a pool of strong potential teachers who can be an asset to the teaching profession not least because of the critical and reflective approach they take.

Initial Mathematics teacher education in Portugal: shortcomings and challenges

Maria Helena Martinho, José António Fernandes, Floriano Viseu, University of Minho, Portugal

The main aim of the implementation of the Bologna process was to foster students' mobility and to facilitate degrees comparability in the European space. However, it had a few side effects in some scientific areas which are still to be fully assessed and understood. As far as teacher education is concerned, a consequence of the Bologna process was a change from the former successful five years degree programs to the new two steps teacher education philosophy. The former were created last century, during the seventies' decade, and comprised all the relevant teacher education components, including teacher training in schools. The latter, includes a first degree (180 ECTS) on the subject(s) that prospective teachers will teach, followed by a second degree (a 120 ECTS masters' programme) on the teaching of the subject(s). With regard to Mathematics teacher education, it moved from a licenciatura (five years degree) in teaching of mathematics (including courses on mathematics, mathematics education, education and teaching practice) to a first degree (three years) on mathematics (including mathematics courses only) plus a two years masters' program on mathematics teaching in secondary school (including courses on mathematics education, education and also on mathematics, as well as teaching practice).

The transition between the two models of mathematics teacher education took place at a time in which demographic issues and policies affecting the teaching profession (e.g., increase in the number of students per class) interacted negatively giving a feeling of low employability with the consequences of a meaningful reduction in the number of candidates to mathematics teacher education masters' programs. This situation has been acting as a threat to the investment aiming at the strong qualification of mathematics teachers that took place over the last forty years, in Portugal. In addition, it lead to a progressive reduction of qualified staff in university departments, as well as to a decrease in research in mathematics education. Thus, this piece of research aims at finding out how mathematics educators foresee mathematics teacher education in Portugal and how do they anticipate the impact of the aforementioned factors and their possible evolution.

An online open-ended questionnaire was applied to mathematics educators in all Portuguese universities used to train mathematics teachers. It focuses on how mathematics educators perceive the nowadays situation, as well as its implications for the availability of qualified mathematics teachers for secondary schools. In addition, it trues to uncover those specialists' proposals to revert the situation as a shortage of teachers can be anticipated soon. Data are expected to highlight actions to be taken in order to revitalize mathematics teachers' careers and to promote the social recognition of the teaching profession. The results of this study will be compared with results collected in other countries and together they will lead to a better understanding of the area and to the development of promising educational policies.

Entrepreneurship Education: development of a new chemistry teacher profile

Aparecida de Fátima Andrade da Silva, Federal University of Viçosa, Brazil

Even today, we have two major challenges in our educational context: the presence of narrow and naive conceptions about the Nature of Science and the process of teaching and learning Science. Thus, these two issues guide the implementation of activities aimed at forming a new teaching profile for the development of the scientific literacy by the citizens of the 21st century. As a teacher educator and researcher, I have been developing professional teachers' knowledge for students from Initial Teacher Education, based on an Entrepreneurship Education. In order to develop a new teacher profile, different activities are carried out studies and discussions of current references for Teaching Chemistry, elaboration of Didactic Sequences, development of the Case Study

Method and Inquiry Teaching. This Entrepreneurial Education implies creativity, innovation, self-confidence, adaptability and risk-taking, as well as the ability to plan and manage projects to solve problems and achieve objectives (EURYDICE, 2012). This education means a new role for teachers (ECOTEC, 2010) involving changes, mainly in didactic and pedagogical conceptions and attitudes. The research question was: what Scientific Education should be developed in the classrooms of the Basic Education schools? The students answered a questionnaire during a reflexive oriented process at the "Supervised Training in Chemistry Teaching II" discipline, which is regularly offered for the Chemistry "Licenciatura" Degree at the Federal University of Viçosa, Brazil. After experiencing various activities discussing Scientific Education, they expressed conceptions that privileged: a contextualized teaching aimed at understanding socio-scientific questions and daily life by the students. Besides, the development of cognitive skills: critical and creative thinking; decision making; how to search; self-confidence; the construction of knowledge; the reconstruction of meanings; how to share; how to work as a team; to know how to propose solutions; active and conscious participation; citizenship. Based on inquiry sciences teaching, with a view to interpreting the world and (re) building a more just and sustainable society. The students had the opportunity to become aware of their own conceptions about the nature of Science and the Science teaching and learning process, as well as to reconstruct them. The Entrepreneurship Education is important to develop a reflexive oriented process that favors the development of creative and critical thinking, autonomy and decision making in the face of problematic situations in school life, administering projects to promote innovative pedagogy and favor the teacher's professional development.

Science Teacher Education in Portugal: is a Sustainable Future Still Possible?

Laurinda Leite, Luís Dourado, University of Minho, Portugal

Teaching science is a challenging profession that requires well-prepared teachers. Besides, science teacher education requires two main types of academic staff: specialists in science and specialist in education, which may act on other programs besides the teacher education ones; specialists trained to act mainly if not only on science teacher programs, that is science education specialists, which are in charge of conveying pedagogical content knowledge to prospective science teachers. Like in other countries, Portuguese universities have hired and/or trained science education specialists to act as science teacher educators. The first generation has already retired even though most of them are still actively engaged in science education in quite different ways.

Before 2007, science teacher education in Portugal was mainly done through five-year undergraduate programs, including science, education and science education courses, as well as teacher training, which was used to take place in schools during the fifth year. According to the results of national evaluations, Portuguese science teacher education programs reached very good levels of performance. On 2007, when trying to implement the Bologna guidelines, science teacher education moved towards a two steps model, starting with a three-year (180 ECTS) first degree on science (either biology and geology or physics and chemistry) and a two year (120 ECTS) master programme on teaching physics and chemistry or teaching biology and geology, from grades 7th to 12th. Since the beginning of the 21st century, the number of candidates to teacher education programmes started decreasing and reached a minimum by the time that the Portuguese government created the teacher education masters' programmes. Due to demographic reasons, there are no newly formed science teachers entering schools. Since then, universities are rarely able to run these programmes due to very low numbers of candidates. A consequence of this is that retired science teacher educators are not replaced. Therefore, shortly there will be no qualified science teacher educators at universities as well as no newly qualified science teachers to replace their retired counterparts. This paper aims to investigate what sort of future do Portuguese science educators anticipate for science teacher education in the country and what needs to be done so that it can still have a sustainable future. Data were collected through an open-ended questionnaire, from science educators associated to all Portuguese universities that are used to train science teachers (grade 7th to 12th), either retired or still on duty. All of them have got a PhD either on science education or on one of the four sciences but moved to science education teaching and research sometime afterwards. Participants in the study are concerned about the future of science education in Portugal and they feel that educational policies are not consistent with the politicians discourse. They argue for a national strategy to counteract the negative effect of ageing and retirement so that a sustainable future for science teacher educators can still be expected. The results can help other countries to prevent similar situations.

"Science is not a boogeyman" and "Recycling" - STEM school projects in the elementary and secondary schools in Serbia and Germany

Milan D. Stojkovic, Evangelical School St. Marien, Deutschland; Vladana Mitic, Sladjana Djikic, Primary School "Djura Jaksic", Nis, Serbia

The beginnings of teaching of natural sciences in Serbia are related to German curricula from the mid-19th century. Although the teaching of natural sciences in Serbia shares common roots with the teaching of natural sciences in Germany, it differs today by concept, scope, the processing of teaching contents as well as experimental teaching. However, the STEM school projects in Serbia portray a joint initiative between the Ministry of Education, Universities and School institutions (primary and secondary schools), while the similar STEM projects in Germany are realized as independent and internal school projects of the secondary and grammar schools.

The poster presents two STEM school projects "Science is not a boogeyman" (Serbia) and "Recycling" (Germany), compares their plan and program, goals, tasks, teaching contents based on the curriculum of natural sciences: physics, biology and chemistry. In addition, the program of STEM projects, school experiments, methods, results, feedback, practical work of students and other activities will be presented and discussed.

The main goal of this poster is to focus on approaching, processing, explaining and presenting natural phenomena, the production of various materials, processing, relevance for modern life and the work of man as well as their application in everyday life based on teaching and inertial school programs and natural sciences in Serbia and Germany. The similarities and differences in the processing of teaching contents will be considered by comparing theoretical contents and practical-experimental teaching of natural sciences, which are reflected through both projects.

Student engagement in various tasks and activities within STEM school projects can certainly not only contribute to increasing interest in natural science, but also to motivating them to learn about natural sciences. Through diverse activities and practical work, students expand and upgrade their skills, and exercise a role of young researchers. It also has a significant educational and pedagogical character and, in addition, reflects in the technological, environmental and social importance of natural sciences in everyday life. Moreover, STEM projects could also be a desirable base for the processing and implementation of integrative and inclusive teaching contents of natural sciences.

Innovation and Sustainable Changes in Education to Identify and Eliminate Math Anxiety

Elsa C. Price, Faulkner University, USA

College and university students often display signs of anxiety such as chronic tardiness, missing classes when there is no illness noted, leaving classes early, doing poorly on exams, withdrawing from class mates and friends to having a sad demeanor or facial expression. Guidance counselors are glad to work with students and help them organize their thought processes and actions to socially acceptable ones and to teach them strategies such as having a "Positive Mental Attitude" and "Deep Breathing Exercises" to reduce the anxiety. There are many types of anxiety related to personal or academic problems in which counselors can assist students use those strategies and to find appropriate solutions. The problem of Math

Anxiety is one type which counselors may assist the students but which mathematics teachers or professors may assist and perhaps can teach strategies which prevent the problem from developing.

The purpose of this presentation is to address the problem of Math Anxiety and how it can be addressed in the classroom so that the students saddled with this malady can successfully accomplish their mathematical goals and be successful in life activities requiring mathematical skills. The author proposes that all aspects of Math Anxiety be addressed in the teacher education department and especially in the courses dealing the teaching of mathematics courses (the course syllabi). The topics

that would be included in these courses would include the following: Defining Math Anxiety. The term may mean different things to different people so a common definition is needed before a solution can be found; Identifying Math Anxiety. This could include several paper and pencil tests which may pinpoint a specific area or focus of the anxiety; Techniques to prevent Math Anxiety. This could be very important in the Mathematics for the Elementary School courses. When students have poor experiences in learning mathematics in early education this may lead to Math Anxiety later. Those elementary teachers who suffered from Math Anxiety themselves and then try to teach mathematics may "pass on" the fear of mathematics or the Math Anxiety to their students; What

to do if you know you have Math Anxiety. There are several strategies that the students can incorporate into their everyday activities and also can use during the testing situation which will help them reduce the Math Anxiety at the time they are experiencing the Math Anxiety.

During the presentation a brief pen and paper Math Anxiety Inventory will be introduced and discussed with those in attendance. Other interactive activities will be used in the presentation with the anticipation that the topic of Math Anxiety will be thoroughly understood by the audience and they will be able to utilize the strategies presented to prevent and/or manage any Math Anxiety they may encounter.

The influence of an undergraduate module including classroom experience on perceptions of teaching and intention to take up teaching as a career: A study of prospective teachers of mathematics

Elizabeth Oldham, Megan Colhoun, Trinity College Dublin. the University of Dublin, Irland

Shortage of well-qualified mathematics teachers is a problem internationally. In Ireland it has been exacerbated by the recent lengthening of teacher education programmes and by deterioration in employment conditions for beginning teachers. To sustain good mathematics education, therefore, new ways are needed for attracting people with strong mathematical content knowledge into teaching. This paper offers a study of one response: an undergraduate module on Mathematics Education, offered to third-year and fourth-year mathematics students in an Irish university. While taking the module, students spend time helping in school classrooms or similar settings. Although the prime motive is to provide social service by enabling undergraduates with good mathematical content knowledge to help school students, the module also offers a "taster" for students who may be considering teaching as a career.

The aims of the paper are to examine the development of the module in the current Irish context, and to investigate students' views of teaching mathematics as a career. The main theoretical frameworks used in addressing the first aim are the analysis of teacher knowledge originat-

ed by Shulman (1986) in terms of content knowledge, pedagogical content knowledge and pedagogical knowledge, together with work on teachers' beliefs about and conceptions of mathematics (Ernest, 2014; Skott, 2015). For the second aim, the theoretical framework is based on the characteristics of those choosing teacher education programmes and their motivations for selecting a career in teaching (Thomson et al., 2012; Watt et al., 2012). The first aim is addressed through document study. For the second aim, two surveys were designed: one for third-year and fourth-year mathematics students including those not taking the module, and the other – focusing on classroom experience – for students taking the module. Among the preliminary findings are that issues related to perceived status are major disincentives, but that taking the module did develop increased interest for some, with the classroom experience being enjoyable (though sometimes challenging). Overall, this suggests that the model has potential for further development and use – in Ireland and perhaps elsewhere – as a preliminary to engaging in formal teacher education.

Effects of explicit instruction on learning science skills in primary education

Patricia Kruit, Ron Oostdam, Ed van den Berg, Jaap Schuitema, University of Amsterdam, Netherlands

The aim of this study is to investigate the effects of explicit instruction in an inquiry-based learning setting on the acquisition of science skills for students in primary education.

In most countries, the learning objectives for science are based on learning what scientists do when designing and carrying out investigations (National Research Council, 2012). The intended outcomes are that students develop an understanding of how science works, and acquire the skills to perform scientific inquiries themselves. For primary school students, effectively performing a scientific inquiry is a challenging task because students generally lack the required skills. Often, the inquiry is also presented as an instructional approach in which students acquire skills by performing inquiries. Although there is evidence that skills can be acquired by learning by doing (Dean & Kuhn, 2007), previous research indicates that explicit teaching methods may be more effective (Lazonder & Harmsen, 2016).

The research question was: What are the effects of explicit skill instruction on students' acquisition of skills in scientific inquiry?

Participants included 705 grades 5 and 6 students from 12 urban Dutch schools. The research constituted a quasi-experimental study with pretest-posttest design. Students were assigned to either an experimental condition including lessons with an explicit instruction method, a control condition in which skills were taught by learning by doing (implicit instruction), or a baseline condition in which students followed their regular science curriculum.

To examine acquisition and transfer of science skills. two paper-and-pencil tests and three performance assessments were developed and administered. Additionally, questionnaires were used to measure metacognitive skills.

Results of a multi-level analysis controlling for pretests, general cognitive ability, age, gender and grade-level indicated that explicit instruction facilitates the acquisition of science skills. The paper-and-pencil test showed no effect. The scores on the performance assessment with a topic familiar to students showed that students in both intervention conditions had significantly higher scores than students in the baseline condition. When skills were measured by means of a performance assessment with a new (untaught) topic, only students in the explicit instruction condition outperformed students of the other conditions. Therefore, this study provides a strong argument for including an explicit teaching method for developing science skills in primary science education.

This study adds to the debate in the field of instruction for science skills how to teach science skills in early stages by comparing explicit and implicit instruction

Teaching Science Concepts by using multiple Representations in Primary Science Education

Charlotte Aksland, Inger Kristine Jensen, Aase Marit Sørum Ramton, Oslo Metropolitan University, Norway

The aim of the study is to investigate how the teachers in the sample use different forms of representations in their work on science concepts with the youngest pupils, and to give examples of what these teachers do and what they tell about their work with conceptual learning. The central concepts in science is crucial for understanding the natural phenomena that we interact with on a daily basis and according to Millar and Osborne (1998) can help people in decision-making and to be involved in public debate. The use of models is a well-known way to help learners to get a better understanding. Scott, Mortimer and Ametller (2011) emphasize the importance of making mental connections between modes of representations. They point out that pedagogical link-making will support the pupils through the multiple representations in science and help them to attain scientific conceptual knowledge. According to Wellington and Osborne (2001) learning «the language of science» is the most challenging part of

science education. Accordingly, every science lesson can be viewed as a language lesson. Øzerk (2009) refers to different levels of representations of concepts in his NEIS model. This model shows different levels of abstraction when introducing concepts, which can be adapted to the pupils' age and development. There is also a framework for working with concepts in science, which has common features with Øzerk's model, but with clearer science perspectives (Gilbert, 2004; Wellington & Osborne, 2001).

The study is based on observation and semi-structured interviews with science teachers in primary school. The pupils were 5-8 years old. Eight teachers and their classes were observed. The observations covered teach-

ing situations both inside and outside the classroom. Six teachers were interviewed about their work in primary school, with a focus on their work with concepts. The study shows that teachers at the primary level use many and varied representations when working with concepts, in accordance with Øzerk's categories of representations and frameworks for representations of science concepts. Studies of how teachers organize their lessons and utilize representations in their teaching of science concepts may be an important way to obtain knowledge about high-leverage teaching practices, which can lead to conceptual knowledge and understanding in the primary classroom.

Elementary and Secondary student teachers knowledge and conceptions of Inquiry Based Learning: description and impact of a teacher-training workshop

Rebelo, C., Vaz-Rebelo, P., Doran, R., Nuclio, Almeida, L., Nuclio; Gonçalves, J., Nuclio; Bidarra, G. University of Coimbra, Portugal

This poster aims to describe a teacher-training workshop on inquiry-based learning (IBL) developed in the scope of the project Next Lab http://nextlab.golabz.eu/ and its impact on student teachers knowledge and conceptions about IBL. IBL is an approach to teaching and learning that aims to involve students in the research process steps as analysing a problem, formulating questions and hypotheses, developing a plan to obtain supporting evidence to answer the question(s), interpret and discuss the results. The conceptual model developed in the scope of Next lab, defined an Inquiry Learning Cycle to specify the consecutive steps of an inquiry learning process, which includes five main phases: Orientation, Conceptualization, Investigation, Conclusion and Discussion. IBL is linked to constructivist and experiential learning theories, as well as a range of pedagogical methods. In the scope of the general steps that characterize IBL, there are however different levels of inquiry that were identified. Since Schwab four levels of inquiry, different categories were considered, eg. Banchi and Bell (2008) proposed levels as: Confirmation Inquiry, Structured Inquiry, Guided Inquiry and Open Inquiry.

Although there is some controversial about the impact of IBL in students learning (Hodson, 2014), there is also evidence of the positive impact of this approach on this process, at least to develop competences as deep comprehension and conceptual understanding (Schmid & Bogner, 2015). However, there is also evidence that teachers still need training about the topic and this should be a priority to ensure the maximal amount of resources are used and that the teachers implement IBL scenarios (Twigg, 2010). The IBL teacher training workshop presented in this work was carried out in the scope of a curricular unit of a Teacher Training Master Course of a Portuguese University. It was based in the conceptual framework and resources developed by the Project NEXT LAB. The participants were 68 student teachers, 37 were female and 31 male, in the first year of the Teacher Education Master course, from different subject areas, as Humanities, Science and Sports. The workshop lasted five sessions. In the first session, inquiry-based approach was presented; during the second, students registered in the Graasp platform and start to create their Inquiry Learning Space. Meanwhile, students had to develop an IBL plan. During this phase, students communicated with the trainers by email or skype. There was a session dedicated to the analysis and reflection about the work in progress. Finally, each group presented their IBL plan and activity to the colleagues. Online questionnaires were answered by the participants, which focused on conceptual and didactic-pedagogical knowledge about IBL and ICT, as well as previous experiences, self-efficacy and teaching conceptions. Participants answered the questionnaires at the beginning of the first session and when all the sessions and tasks involved in the workshop ended. Post questionnaire included questions about platform evaluation. IBL class plans developed in the platform were also analysed. Results evidenced lower levels of student teachers pre-knowledge about IBL but an increase in content and pedagogical knowledge in the post questionnaire, after the workshop took place. Content analysis of lesson plans confirmed these results.

Practice mentors for teacher students mentoring and the potential impact the mentoring have on teacher students perception of moving towards becoming a professional teacher

Geir Luthen, Østfold University College, Norge

Which approaches to mentoring can be revealed when school mentors guide the teacher students and in which way do these approaches contribute to the students perception of moving towards becoming a professional teacher?

We are leaning to the works of Lauvås & Handal (2014, 2016) and Lejonberg (2016) who represent different approaches to what guiding might be. We are also paying attention to research that deals with the concept of the professional teacher (Grimen 2008, Heggen 2010). The research strategy is Participartory Action Research (Pålshaugen, 1994) with a phenomenological approach (Giorgi 1997). The methods applied are focus group interview (Gulliksen & Hjardemaal 2011) and the letter method (Berg 2000). Utterances from the teacher students in the materiale suggest that the students are confronted with different mentoring profiles. Some of the profiles

represent quite different professional approaches to mentoring. Nevertheless, the utterances from the students indicate that they more or less seem to appreciate this diversity of mentoring approaches.

A majority of the utterances from the students are characterized by a contextual, concret and her and now attitude towards the very complex work of a teacher; they are mainly occupied by the planning and the compIetion of their teaching and how to behave in the classroom. In the next phases of the project we intend investigate the students perception of the impact the mentoring offered to them might have towards becoming professional teachers. The project is important for educational research in the Nordic countries linked to the mentoring of student teachers because of the potential contribution to the discussion of which approaches to mentoring we should choose, if we ought to choose (Bjerkholt 2017).

The importance of feelings - historical empathy in the classroom

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The concept of historical empathy is seen as vital in order to attain the ability historical thinking, but how historical empathy ought to be taught is contested. Primary sources are advocated as important in teaching historical empathy but how should they be incorporated in the history teaching? Empathy is an internal process which is difficult to identify and difficult to measure. As all empathy, historical empathy needs imagination and compassion, but historical empathy is seen as a way to accomplish historical thinking, not as a goal in itself (Lévesque, 2008). It is believed that students who have the ability to attain historical empathy as perspective recognition also can sense empathy for others in present times (Lgr 11; Barton & Levstik, 2004; Thorp, 2014). The questions for the article is whether students could attain historical empathy with digitalized primary sources and a no prior instruction in historical empathy. The aim is also to see if

the students can attain historical empathy as perspective recognition as Barton and Levstik defines the concept (Barton & Levstik, 2004).

The empiric data were collected at one upper secondary school and in five classes, 110 pupils participated. The task for the students was to formulate a question to the digitalized primary source material, try to find the answer by making searches in the database with the digitalized primary sources and other primary and secondary sources. The empirical material for this paper consists of interviews with the students and the examination papers they wrote for the assignment and the discussions and oral presentations the students participated in. The study showed that students could experience historical empathy with primary sources containing very little information. This opens up for teaching historical empathy even when the primary sources are few. The most evident examples

of historical empathy were displayed in discussions one class had after their presentations. The students who used more sources showed more contextual knowledge in their papers and presentations. In my study, most of the pupils only express emotional empathy (empathy as caring), they may however have experienced other forms of empathy but not expressed them in any for me accessible way. The pupils seem to ask for emotional empathy and if the teachers choose to provide them with that the teacher have a chance to develop that further to empathy as perspective recognition. Since historical empathy is a process that is seen as important in history teaching in several questions the results and the way of teaching with digitalized primary sources could be interesting for history teaching in other countries apart from Sweden.

Studying in summertime: a research about the effectiveness of the September exams for secondary school students who had bad marks during the previous school year

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In Italy, the students of secondary school, who had bad marks in some subjects during the school year, have to face one or more exams in September in order to assess if they can be passed to the following grade. The school offers some free courses at the beginning of July but, usually, the students have to study individually, paying sometimes private teachers.

This ongoing research is aimed at investigating the significance of this kind of exams. In particular, we want to analyze whether these exams have either more formative or summative aspects (De Landsheere, 1971; Scriven, 1967; 1991). The research questions are as follows:

- which are the main issues related to the September exams, perceived by the students, the teachers and the parents?
- do the September exams develop more formative or summative aspects in the students?
- We are involving 69 participants:
- 35 students from different grades of secondary school (students aged from 15 to 19)
- 12 parents of different students
- 22 teachers of different subjects

We will administer a questionnaire to all participants in order to collect quantitative data; in addition, we will interview the teachers and the parents and, lastly, we will arrange focus groups with the students in order to collect qualitative data.

The data analysis will be carried out with SPSS, in particular, we will analyze the differences with chi-square, ANOVA and t-test; instead, we will use MAXQDA, a qualitative data analysis software, to underline the main categories and the ideas which will be arisen from the student interviews and the focus groups. The quantitative and qualitative data analysis will be focused on the different aspects related to the September exams. During the presentation, we will show in detail the data analysis, the findings and, also, the limits, the shortcomings and the future development.

Computing in Irish schools: Developing a Community of Practice for teachers across all levels of the Irish school system

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The context for this paper is the introduction (or re-introduction) of aspects of computing across primary and second-level schools in Ireland. Three separate initiatives are taking place – at primary, second-level junior cycle and second-level senior cycle; each is supported by professional development offered just to teachers involved in early phases of implementation of that initiative. Complementing and extending this is a Google-funded project run by the Computers in Education Society of Ireland (CESI), a voluntary teacher professional network concerned with all aspects of digital technology in education. The project "CESI•CS" (CESI Computer Science) is intended to build up a sustainable Community of Practice (CoP) (Wenger, 1998) supporting teachers at all levels who are interested in computing and its relationship to digital literacy. The main aims of this paper are to analyse the implementation of the model used by CESI•CS, and to evaluate its success in establishing an emergent CoP for computing. The theoretical frameworks and methodologies used in key aspects of the project and in evaluating its outcomes are described separately. As regards project organisation: after an initial symposium, regional face-to-face meetings were held all round Ireland – a series of three in each of seven Education Centres. The theoretical frameworks underpinning their design, especially for the first meeting in each centre, were Salmon's (2011) five-stage model of facilitation together with use of "CS unplugged" and "maker" activities to address TPACK (Koehler & Mishra, 2009), enabling participants to practise their craft through developing both CK (content knowledge) and PCK (pedagogical content knowledge). The form of subsequent meetings was determined by the way in which embryo communities evolved. The project's formal end will be marked by a national workshop bringing participants together to share their work and their ideas for sustaining the CoP. For evaluation, Kirkpatrick's four-level analysis provides a framework (Kirkpatrick & Kirkpatrick, 2016). The focus this year is on the first two levels, 'Reaction' (participants' reactions to the combined effect of the regional meetings and the national workshop) and 'Learning' (especially with regard to participants' developing identity with regard to computing, rather than their competence). Data are being generated by means of questionnaires, focus groups and participant observation. Participation in the regional meetings has achieved the hoped-for uptake by teachers from all levels in the education system; reactions have been positive. Findings from the evaluation should highlight strengths and weaknesses of the CESI•CS model in establishing an emergent CoP, and contribute to the ongoing international debate about the role of computing in relation to the broader agenda for digital literacy.

The impact of immediate feedback on developing presentation skills: an exploratory study in virtual reality

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Although scholars in presentation research emphasized the essence of feedback delivered on virtual reality-based tasks (Merchant, Goetz, Cifuentes, Keeney-Kennicutt & Davis, 2014), it remains unclear whether the acquisition of students' oral presentation skills can be enhanced by the timing of feedback (Hattie & Timperley, 2007). An exploratory study, recently conducted at a Dutch university, explores the potential differential impact of immediate versus delayed feedback within virtual reality-based tasks (Andolsek, 1995), in which undergraduate students present to a virtual audience and receive feedback generated by the computer, on students' presentation behaviour. In preparation for a final presentation assessment, the potential effects of immediate feedback are compared with a control condition of a virtual reality-based presentation task accompanied with delayed feedback. Performance assessments, including validated rubrics for oral presentation skills (Van Ginkel, Gulikers, Biemans & Mulder, 2015b), were used for data collection. Results demonstrated significant improvements in students' presentation skills, however no differences between the conditions were found. Subsequently, self-evaluation tests revealed that students who conducted their presentation in virtual reality and received immediate feedback highly evaluated the detailed and analytical characteristics fostering their presentation delivery aspects, such as eye contact, use of voice, posture and gestures. More studies are needed to investigate comprehensive learning environments (Van Ginkel, Gulikers, Biemans & Mulder, 2015a) on students' presentation skills in virtual reality, since combining different forms of feedback could encourage students' learning processes and foster students' learning outcomes. In teacher education, along with metacognitive tools, teacher educators could integrate opportunities for reflecting on ways of diversifying and personalizing feedback in instruction (Karaman, 2014). Emphasizing the value of virtual reality-based presentation tasks for self-assessment purposes could also contribute to in-service teacher education processes.

Developing preservice teacher reflective thinking through mobile devices: an Italian experience

Davide Parmigiani, University of Genoa, Italy; Enza Benigno, Educational Technology Institute, National Research Council, Italy

This study was aimed at investigating the role of mobile devices in facilitating reflective thinking in order to develop student teacher competences. The overall research question was: how to connect theory and practice and how they can support each other in a virtuous circle? The specific research question was related to the contribution of mobile devices within this relationship: how can mobile devices facilitate reflective thinking in order to develop teacher competences? The study has been designed by two institutions: University of Genoa and Educational Technology Institute, National Research Council. The design model provided a circle composed of four steps: knowledge acquisition, teaching and assessing strategies have been presented during lectures at university; reflection on knowledge, the student teachers experienced a first period of reflection with mobile devices, on the lectures' topics; application of knowledge, the student teachers applied the strategies in the classroom during

teaching practice; Reflection on application of knowledge, the student teachers experienced a second period of reflection with mobile devices, on the activities carried out in the classroom.

This cycle has been carried out twice: the first time focused on teaching strategies, the second time on assessing strategies.

The participants have been 12 Italian preservice teachers. A protocol indicated the actions at university, at school and during the reflection periods. Two questionnaires have been administered to the student teachers in order to underline if and how the mobile devices affected the reflection level and the teacher competence development.

In particular, we used the Profile of Reflective Thinking Attributes (PRTA) questionnaire (Taggart & Wilson, 2005) and a Reflective Thinking and Mobile Devices (RTMD) questionnaire composed of closed and open-ended questions, in order to collect both quantitative and qualitative data. Repeated measures ANOVA has been carried out to analyse the quantitative data; instead, we used MAXQDA, a qualitative data analysis software, to underline the main categories and the ideas arised from the student teachers' comments.

The quantitative and qualitative data analysis shows how mobile devices can support the reflective thinking development of novice preservice teachers, during an educational path carried out between the lectures at the university and the teaching practice at school. During the presentation, we will show in detail the data analysis, the findings and, also, the limits, the shortcomings and the future development.

A Program Development Study to Hone Teacher's TCK

Wakio Oyanagi, Nara University of Education, Japan

Teachers are now not only expected to be able to choose effective ICTs or ICT-based materials as educational materials, but also, in using ICTs in their lessons, must be able to guide children to relate their ability to use the information with the specific teaching content. Accordingly, in analyzing the training content necessary for teachers to master such ICT use, I focus on the knowledge concept that is featured in the relevant literature: "Technological Content Knowledge" (TCK). TCK means knowing what educational technologies to select, deploy, and develop for a given learning content. TCK originally stems from the theoretical framework "Technological Pedagogical Content Knowledge" (TPACK).

In the present study, I evaluated the outcomes of the program to clarify which parts of the program were effective in (1) reducing trainees' anxieties about using ICT in a lesson and (2) helping raise trainees' awareness about TCK. The individuals who participated in the 2016 program were 24 trainees and in the 2017 program were 18 trainees. The first study was Schmidt et al. (2009), which is frequently cited in studies that examine the use of TPACK in teacher training settings. Regarding the second objective, the trainees made reflective notes in their portfolio after they (1) practiced handling the digital textbooks, and again after they (2) prepared tests. Using KH Coder, I subjected these notes to text mining analysis to ascertain how the trainees had responded to the training items such as "class subject content," "understanding the children," and "using ICT." By analyzing collocations, I investigated the attitudinal changes in the trainees, and the value and outcomes of the two tasks. For their final task, the trainees made notes about a class design (teaching plan) to be implemented in a setting where each learner uses an ICT device. I analyzed the content of these notes. For this analysis, I use the TPACK framework and SAMR model. To recap the findings, (1) introducing more time for experientially learning the roles of the teacher and children in scenarios where each learner uses an ICT device was effective in reducing the trainees' anxieties about such scenarios; furthermore, (2) introducing opportunities to analyze textbooks and design lessons for applying ICTs, and increasing the time for preparing tests, helped the trainees become familiar with selecting appropriate technologies for the content and preparing actual lesson plans. Furthermore, the analysis of the questionnaire responses (the correlation analysis) provided some insights for formulating instruction plans by linking them with TK, TPK, and TCK. For example, the responses highlighted the importance of creating tasks that encourage the trainees to take an active interest in ICTs. I have derived these findings in the course of running this program at a teacher training.

Preparing to teach in the digital age: What do student teachers need to learn to be prepared for a digital future?

Anne Yates, Louise Starkey, Victoria University of Wellington, New Zealand

Digital technologies are changing the context of teaching and beginning teachers need to be competent in this increasingly digitised environment: they need to leave initial teacher education (ITE) with confidence in the current and future context of schooling (Zeichner, 2012). This research was informed by the technological, pedagogical and content knowledge (TPaCK) model that provides a framework for integrating digital technologies into teaching (Mishra & Koehler, 2006) and the notion of professional digital competence (Gudmunsdottir & Hatlevik, 2017). The question that arises is how and what do student teachers learn to enable them to teach in digitised schooling contexts or education systems? This exploratory project sought to answer this research topic through focus group interviews of secondary school student teachers from two programmes at the end of their initial teacher education programme. Three areas of professional knowledge were explored; the use of technology in teaching and learning, the management of digital learning environments and the professional work of a teacher in the digitised schooling system. The data was analysed using abductive reasoning drawing themes from the data and from the research literature. Sources of student teacher knowledge were: ITE (including placement in schools and university courses): undergraduate

courses; and life experience. Schools provided learning about the operation of digital platforms, e.g. Google Classroom and student learning management systems. University study provided subject specific technology, e.g. programmes for graphing or language skills. Participants acquired knowledge from these sources through formal professional development and developing personal networks. Overwhelmingly, there was agreement that they "figured out" technicalities. Descriptions of pedagogical use were limited to application to established practice and imitating paper-based learning. Implications are that pedagogical, not technical, knowledge needs attention in ITE through both university and practise components. Student teachers' learning in the digital age should involve a trialogic approach where technology enhances and sustains collaborative learning (Paavola & Hakkarainen, 2014). Digital technology should enrich learning and allow learning experiences that are otherwise impossible (Sansone, 2016). The issue for ITE is identifying and incorporating high-leverage practices into programmes (Zeichner, 2012). To deliver quality education to all (United Nations, Sustainable Development Goal 4), ITE programmes and practices should prepare student teachers for a future in digitised schools and education systems.

Preparing teachers to teach in digitised schools and education systems: Understanding today to prepare for tomorrow.

Louise Starkey, Anne Yates, Victoria University of Wellington, New Zealand

The research reported in this paper explored how student teachers experience learning to teach in preparation for their future teaching in digitised schooling contexts and education systems. As society and schools become increasingly digitised inequities can emerge. Access, capability and participation are three types of digital divides identified in the literature (Wei, Teo, Chan, & Tan, 2011). Students at school, particularly those from disadvantaged populations, can learn how to participate in present

and future digital environments so that their voices are heard, but to do this they require access, capability and to be taught within digital contexts (Starkey, 2016; Starkey, Sylvester, & Johnstone, 2017). Initial teacher education programmes therefore need to prepare teachers to be able to teach in the digitised schooling contexts of the future.

This exploratory project sought to explore the research topic through focus group interviews of secondary school student teachers from two programmes at the end of their

initial teacher education programme. Three areas of professional knowledge were explored; the integration of technology in teaching and learning, the management of digital learning environments and the professional work of a teacher in the digitised schooling system. The data was analysed using abductive reasoning drawing themes from the data and from the research literature. The student teachers in this study identified digital inequities within the schools in which they developed their knowledge of practice. The student teachers experienced contexts that varied from limited access (by policy or practice) to digitised and paperless schools. This meant that there was an inequitable experience for the student teachers with some feeling well prepared to be a teacher in digitised schools in the future, while others felt disadvantaged.

Digital inequities exist at all levels, from geographical areas to within initial teacher education programmes. To affirm democratic practices for a more equal and just society, there is a need for teachers of the future to be able to empower children to participate in the digital environment. Such an agenda goes beyond the notion of student teachers learning how to integrate technologies into practice. A challenge for initial teacher education is how to develop the approximations of practice (Grossman et al., 2009) for student teachers in contexts with variable stages of digital integration.

Information and Communication Technology and Mathematics in Education for Sustainable Development: Pre-service Teachers' Viewpoint

Ivana Đurđević Babić, Diana Moslavac Bičvić, Faculty of Education, University of Osijek, Croatia

Recently, sustainability as a term has been brought into focus in all segments of human life, and in many countries its implementation has been supported by certain political acts. In the Strategy for Sustainable Development of the Republic of Croatia (2009), education for sustainable development has a significant role and, according to the Strategy, the principles of sustainable development should not be integrated only in formal education but also in other forms of learning. Rieckmann (2012) emphasises the importance of schools and universities in the process of generating new knowledge, raising awareness of sustainability and developing appropriate competences for life and work in a sustainable society. In addition, he points out the institutional responsibility for creating positive attitudes towards sustainability issues among pupils and students, so that they could become a significant factor in the sustainable future. Although being neglected, information and communication technology (ICT) and mathematics can serve as a basis for raising students' social awareness and accountability (Makrakis & Kostoulas-Makrakis, 2005). Keeping that in mind, educators should try to use them as a means for bridging the gap between the prescribed curriculum and sustainability issues. Based on the five elements of sustainability listed by Souter et al. (2010), and with the focus on ICT and mathematics in the context of education for sustainable development, this research has multiple goals. It aims at exploring how familiar the use of ICT in all dimensions of sustainable development is to pre-service teachers. It also explores how much they had to know in the previous levels of education about sustainability services that have been so far implemented in Croatian society, especially in education system, and how much they use them in daily life. Furthermore, in order to empower elementary school children for sustainable development, it explores pre-service teachers' opinion regarding the necessity of elementary school children's education on the specific ICT and sustainability service. Moreover, it looks into pre-service teachers' attitudes about the role of ICT and mathematics in education for sustainable development. The results based on a survey conducted with the pre-service teachers at the Faculty of Education in Osijek (Croatia) will be presented on this poster. The preliminary results suggest that pre-service teachers lack the background knowledge and experience which would enable them to understand the concept of sustainable development and to successfully integrate ICT and mathematics into education for the long-lasting sustainability

Developing textbooks of the future

Paul Hopkins, University of Hull, UK

The textbook is a powerful object in teaching and learning (Schleicher) and is used in the majority of schools and schools systems to develop both content knowledge and pedagogic knowledge (Shulman, 1986). The University of Hull as part of a British Council Newton project has been looking at the development of digital books with the University of Education Hanoi and the University of Education Da Nang in Vietnam. Using the model of the Digital Hybrid text (Hopkins, 2016) a series of electronic books are being developed and then tested with teacher educators in Hull and in Vietnam.

The development of the books with use an iterative design based research methodology (Collins, 1992) using a series of cycles to test the impact of the books using a series of metrics. It will look at the impact of the design process on the thinking of the teacher educators, on the impact of using the books on the teacher trainees and on the nature of the books as an impact on the thinking about the construction of books.

The presentation will explore the impact of the British Council project but will also be looking for feedback on the development and design process of digital books and for future partners in collaboratio

How much grammar is enough? – learners' grammatical competence in first and foreign language at the end of primary education

Ivana Trtanj, Ksenija Bencina, Faculty of Education in Osijek, Croatia

Numerous studies have confirmed that children's language development does not end when they start school, but is a continuous and lifelong process. The research on grammatical competence in Croatian language of pre-school children indicates that morphological development has not yet finished at that time. Children simplify or generalise linguistic rules and do not follow sound change rules (Kuvač, Cvikić, 2003). Therefore, learners can often find certain linguistic content difficult or incomprehensible, especially if it is cognitively demanding. In order to avoid inappropriate ways of teaching, which can lead to language anxiety (Jelaska, 2017), it is necessary to teach language communicatively by following the principles of humanistic education. Its main principle states that language is an abstract and comprehensive sign system that should be taught in its entirety (Pavličević-Franić, 2005:72).

The acquisition of morphology and syntax begins around the age of 12 on the level of language automatization. In both first language and English as a foreign language instruction learners are taught norms and rules of standard language. The main aim of Croatian language teaching in primary school is to train students for communication, i.e. to develop linguistic-communicative competence in spoken and written usage of language in all registers. The main aim of English language instruction is to develop learners' communicative competence and language skills necessary for international communication (HNOS, 2006). This means that first of all, a learner has to gain basic level of communicative competence in order to be able to develop metalinguistic awareness. In order to successfully respond to the challenges of knowledge society and world market, the EU has determined seven basic competences for lifelong learning and education policy-makers in Croatia have acknowledged these competences. Among these competences are communication in mother tongue and in a foreign language. The aim of this paper is to examine learners' grammatical competence, more precisely morpho-syntactic aspect of that competence, in Croatian as mother tongue and grammatical competence in English as a foreign language. Grammatical competence refers to linguistic knowledge and skills needed for using that knowledge in communication. Grammatical competence will be examined in learners' written compositions and the following elements will be taken into account: correctness of morpho-syntactic forms and structures and the level of their complexity. The results of this research indicate that it is crucial to pay attention to learners' individual differences, circumstances and factors in evaluating linguistic-communicative level in educational context especially when developing curricular documents since they provide the framework for teaching, task design and evaluation of learning outcomes. The results will give insight into developmental patterns of morphological acquisition as an element of grammatical competence of learners of Croatian as a mother tongue and English as a foreign language. The results might encourage teachers to rethink their approach to designing teaching materials aimed at developing grammatical as well as communicative competence.

Goals and Expectations of Foreign Language Learners: The Prospective English Language Teacher Perspective

Hulya Ipek, Anadolu University, Turkey

This study aims to investigate the insights gained by prospective English language teachers on foreign language learner goals and expectations. Interviewing language learners on their goals and expectations was a requirement of a selective course the participants took from the researcher. 18 students enrolled in the course agreed to participate. They were either 3rd (sophomore) or 4th (senior) year students at the ELT department.

Each participant interviewed 3 foreign language learners and collected demographic information (such as age and language level) from their interviewees and asked the language learners what their goals are in learning a foreign language, what their expectations are and whether their expectations have been met. Each participant presented his/her findings during the selective course hours. After all the presentations were made, participants were asked to answer 2 open ended questions regarding the interviews they conducted and presentations they have listened to. The first question asked participants to indicate what insights they gained from their interviewee's responses and their classmates' presentations. The second question asked participants to indicate how these insights will affect their future language teaching. Participants reported that they observed that the goals of language learners vary from being orally competent in the target language to getting a better job. In terms of leaner expectations, participants reported that they observed that language learners would like to engage in more communicative activities but are exposed to traditional teaching methods. Considering the second question, participants indicated how this awareness will affect their future teaching practices.

Visual bridges: sustainable inclusion in mixed-ability language classrooms

Elizabeth Mix, Butler University, Odette Dijt, Central Library Rotterdam.

Many studies (Anderson,1999; Grabe, 2009; 2014; Lems, 2012; Taguchi & Gorsuch, 2012) demonstrate the difficulty of defining and measuring fluency in ESL students with different proficiency levels. Because students develop receptive and productive skills at different rates due to a multitude of internal and external factors, by default every language teacher works with "mixed-ability" groups. However, the authors find that in their language classes in the Netherlands students are increasing mixed due to factors connected in some way to globalization. For instance, refugee populations from Syria feel pressured to simultaneously acquire Dutch language skills and cultural knowledge in order to obtain long-term legal status, while globalization in the more strictly economic (commercial) sense is prompting large corporations to mandate English training for their employees. To maintain a sense of inclusion for individuals of mixed ability in each of these contexts, the authors have developed a way to leverage visuals by combining two well-established approaches in an innovative way—VTS (Visual Thinking Strategy, developed by Philip Yenawine and Abigail Housen) and Bloom's Taxonomy of educational objectives, which classifies thinking into increasingly complex cognitive categories. VTS, which uses art in facilitated discussions to encourage participation, close looking and critical thinking, is a non-threatening strategy that creates a safe environment to support weaker language learners in mixed-ability groups.

(Huh, 2016) documented the connection between creativity and language development and determined that VTS was a promising but underutilized method for English-language education, and, further, called for development of techniques and models for level-appropriate application. The authors of the current study, who both have art and foreign- language-teaching backgrounds, believe they have developed just such a model by integrating VTS intentionally with Bloom's Taxonomy of educational objectives to create a more robust pedagogical framework. At the same time, VTS can be seen as addressing what some scholars have determined to be shortcomings in Bloom's approach (Krathwohl, Bloom and Masia, 1974; Paul, 1993; Furst, 1994). The approach developed by the authors honors the profoundly visual nature of contemporary society and levels the language-learning playing field. Moreover, the authors argue that careful selection of visuals by individual instructors is not only a sustainable approach, but also one capable of encouraging development of empathy among students of different cultural backgrounds. The system makes learning more enjoyable and meaningful for students of all levels of FL development in mixed-ability groups.

A Literacy-based Analysis of Pre-service EFL Teachers' Research Article Reading

Demet Yayli, Pamukkale University, Turkey

A literacy-based orientation to language teaching and teacher education encourages engaging learners in reading and writing as acts of communication. "[T]he view that literacy is not a uniform, monolithic entity but a collection of social practices that operate within particular Discourses, suggests that literacy needs to be developed through multiple experiences, in multiple contexts, with multiple text genres … for multiple purposes" (Kern,2000, p. 37). In his description, Kern identifies literacy-based approach as "a style of teaching educators ought to consider if they wish to prepare learners for full participation in societies that increasingly demand multilingual, multicultural, and multitextual competence" (p.15-16). Following this mindset, in this study, as a teacher educator working with pre-service EFL teachers for more than a decade, I have decided to examine how my students read, interpret and evaluate research articles (RAs). The importance attached to certain research genres such as RA (Swales, 1990) and "the enourmous role the knowledge of discourse conventions and registers of specific fields plays … in helping scholars become insiders in their disciplinary communities" (Yayli & Canagarajah, 2014, p. 95) gave the impetus to the investigation of a group of EFL pre-service teachers' views on their RA reading engagement. Their views were collected with some open ended questions and the participants were to reflect on issues to explain how they identify RAs, their targeted readers, the possible contributions to their knowledge base/their teaching, their challenges in reading RAs.

This study has focused on examining the participants' reactions to RAs because of the power RAs have in dissemination of information in the field. There is a huge gap between research and practice in the field of education (Borg, 2009). In Borg's study, one main reason for language teachers' limited research engagement was finding published research hard to understand and parallel to this the participating pre-service EFL teachers in this study identified several problems causing difficulty for their reading/interpreting journal articles. One of the biggest problems some stated was their negative feelings stemming from their perceived limited success in the interpretation of RAs. To ease the comprehension difficulties and help pre-service EFL teachers incorporate information in RAs into their professional knowledge, teacher educators should spare more time and effort for a design of their courses enriched with more RAs. As a natural outcome of such need-driven academic reading practice, we can see an increase in the views of teachers and pre-service teachers who can be more willing to accept a researcher role besides their teacher role.

Challenges of integrating reflective practice into a school-based practicum: The case of EFL student teachers in Japan

Chitose Asaoka, Dokkyo University, Japan

Reflective practice is widely recognized as a crucial factor in the professional development of teachers (for example, McIntyre, 1993; Schon, 1983). It is an essential tool for teachers to analyze and evaluate their practice and facilitate the development of their own personal theories of educational practice. However, reflection in teacher development is often described as a concept which is abstract and ambiguous; especially for novice teachers without enough of either a knowledge base or practical experiences to draw upon, it is one of the major challenges that they are likely to encounter. It is challenging particularly when the length of a school-based training is limited and student teachers are isolated during the practicum such as in the case of Japan (Yoshimoto Asaoka 2015). Student teachers need to develop a wide range of teaching capacities, such as using a lesson plan, managing a class, and many others in just three weeks in Japan. Also, reflection is still a new skill for many student teachers in initial teacher education in Japan, and it requires specific instruction and support, such as setting

aside specific times for reflection.

Thus, in order to provide opportunities for professional inquiry and examine the benefits of reflective practice during a school practicum, a case study was conducted. Following the model of the six stages of integrating the EPOSTL into pre-service teacher training (Orlova, 2011), student teachers were encouraged to work with a list of can-do descriptors during their school practicum. The list was used to help them identify the skills they would like to focus on and set their personal targets in their teaching. The student teachers were interviewed twice, prior to and after the practicum. The results of the interview data suggest that the reflection on the descriptors and the self-assessment of their teaching contributed their professional development to some extent. The descriptors also served as a frame for follow-up discussions and encouraged them to connect the theoretical knowledge they have gained and its practical application during the teaching practice. The presenter will also discuss the challenges of integrating reflective practice into pre-service teacher training in Japan based on the feedback from the participating student teachers.

Reflecting on Change at an EFL Institution: Teachers' Negotiations of a Systemic Change Initiative

Ömer Faruk İpek, Abant İzzet Baysal University, Turkey; A. Cendel Karaman, Middle East Technical University, Turkey

In language education settings across the globe, issues ranging from sociocultural challenges to pedagogical innovations (e.g. the need for innovation in preparing teachers) continue to be key areas of consideration in educational research (Bense, 2016). In this paper, we explore how teachers of English as a foreign language (EFL) at a higher education setting in Western Turkey negotiate a systemic change initiative. Grounded in the systemic change concept and taking 'resistance' to change as a common phenomenon in educational contexts (including EFL programs), we underscore the criticality of a complex conceptualization of change in education. In this regard, because teachers are often expected to become both initiators and the agents of systemic change, it is important to develop a deep understanding of how teachers negotiate these initiatives in specific contexts (Noriko, 2010).

Current literature on systemic change in education indicates that initiators of educational change need to possess specific skills to handle systemic change (Fullan, 2016; Jenlink, 2009; Naicker & Mestry, 2016). However, teachers often know little about organizational leadership and change (Reigeluth & Garfinkle, 1994). While the emergence of professional learning communities and the rich variety of teacher research traditions have made possible a substantive body of literature on various professional development settings, there is limited research on how in-service foreign language teachers negotiate organizational change.

In this paper, we relied on a qualitative case study design. Data were collected over a two-year period. The case of an EFL school and its systemic change with relevance to the curriculum, organization, assessment, and communication constructed the focal inquiry. Data were collected via relevant artifacts (e.g. institutional documents), observations of organizational meetings, and semi-structured individual and focus group interviews with eleven instructors. Data were transcribed verbatim. The interpretive analysis stages included coding, generating categories, and identifying prevalent themes. Our analysis revealed that teachers' negotiations of the systemic change were related to the following: (1) investment in contributing to change, (2), reconstruction of administrative and academic organization (3) whole school involvement and negotiation, (4) specification of benchmarks and standards, and (5) attributes of the leader. Furthermore, these five themes were interpreted with regard to the professional development of in-service EFL teachers in this context.

Information Communication Technology in Teaching English as a Foreign Language: Analysis of Teaching Methods Representing TPACK on Transformation

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This study focuses on the state of information communication technologies (ICT) integration into teaching English as a foreign language (EFL) from the perspective of Czech primary school EFL teachers' perceptions and practices. Along with growing significance of ICT on mediation in education and subject specific teaching and learning processes (Arnesen, 2010), the study envisions crucial role of EFL teachers on forming innovative didactic practices of EFL by effectively integrating ICT. It, therefore, describes significance of teachers' interactive pedagogical and media skills to integrate ICT into real class teaching to developing foreign language learning as an innovative process of skills learning in addressing global citizens' intercultural, meta-cultural, material cultural etc. communicative competence goals (Roth, 2001: Byram, Gribkova, & Starkey, 2002) to sustain and thrive through new global economy and cultures (Coller and Gramms in Selwyn, 2011, p.30). In short, guided by the principle that education and educators are to drive technologies (Dcokstader, 1999), the study describes essentiality of EFL teachers' technological, pedagogical, content and context knowledge-TPACK and not least-its constrictive implementation for educational innovation in EFL learning (Koehler & Mishra, 2009) as defined. Designed on interpretative phenomenological approach to inquiry (Creswell & Poth, 2017), the data on Czech primary school EFL teachers' perceptions and instructional practices of ICT in EFL class were gathered and analysed by means of semi-structured open-ended interviews with the teachers along with class observations of teaching with ICT. Supported by Atlas.ti, qualitative theme analysis method was used to data analysis and interpretation.

Sustainable Pre-service Language Teacher Education: Understanding individual differences and supporting positive learning orientations and attitudes of student teachers

Barbara Mehlmauer-Larcher, University of Vienna, Department of English

Pre-service language teacher education programmes present considerable learning challenges for student teachers on various levels. On the one hand, student teachers are expected to critically question their opinions on and attitudes towards language teaching and learning; on the other hand, they need to acquire knowledge from various disciplines and be prepared to integrate and transform their knowledge for application in their professional field - the language classroom. These challenges require student teachers to develop effective metacognitive learning strategies for self-directed learning as well as the ability of self-monitoring and self-regulation (cf. de Bruin & van Gog 2012) for successful and sustainable learning outcomes, for example during practice phases of their study programme.

Studies carried out by Oosterheert & Vermunt (2001) and Hagger et al. (2008) reveal that with regard to teaching practice experiences, student teachers and practising teachers, like learners in general, show considerable individual differences with regard to their ability to direct and to critically reflect on their learning, and to acquire effective metacognitive learning strategies. Based on their research with in-service teachers Oosterheert & Vermunt (2001) distinguish between five orientations relevant for

the description of individual teacher learning, ranging from a so called simple survival orientation to a complex open meaning orientation. Hagger et al. (2008) held post-lesson interviews with pre-service students and identified five main dimensions according to which attitudes and approaches to learning from practical experiences can be categorized.

This presentation reports on a similar study carried out at the University of Vienna encompassing guided interviews with twelve pre-service students after their first English foreign language teaching practicum during their bachelor programme. The interviews were qualitatively analysed and a number of individual differences in student teachers were identified related to student teachers' spectrum of different learning orientations, their metacognitive strategies and their varying attitudes towards learning challenges which they experienced during their first English foreign language teaching practicum phase.

Following from these insights gained, the question arises as to how teacher educators should respond to individual differences and how they can foster and support the positive orientations and favourable attitudes which are prerequisites for self-directed learning, effective self-regulation and self-monitoring. Some results will be presented from the empirical study as well as some teaching instructions developed in order to meet the challenges of individual learner differences found amongst EFL teacher students.

Learning to Foster Autonomous Motivation

Katharina Glas, Michelle Miralles and Pablo Tapia, Pontificia Universidad Católica de Valparaíso, Chile

The support of autonomous motivation in learners has been shown to have more positive long-term effects on learning than teacher strategies trying to control learner engagement through the use of extrinsic incentives. Yet, novice teachers are often socialized into school cultures in which a controlling motivational style prevails (Reeve 2009). This paper explores the 'undermining effect' of extrinsic rewards on intrinsic motivation from the perspective of novice teachers in the context of English teaching in Chile, and proposes alternative approaches. The main framework used for this study is Self-Determination Theory (Deci & Ryan 2012), and its application in language classrooms (e.g. Ushioda 2011). For a deeper understanding of novice teachers' cognitions in context, a socio-cultural perspective on teacher education is taken (e.g. Johnson 2009).

For this qualitative research project, seventeen novice teachers were interviewed individually and in groups. Furthermore, two cases were selected in which teachers implemented small-scale exploratory practice research to examine the effect of more autonomy-supportive teaching strategies (Allwright 2003). In short narratives (Barkhuizen et al. 2014), the teachers report on obstacles, opportunities and successes encountered during this process.

In certain school contexts, both students and mentor teachers expect novice teachers to reward class work extrinsically. Building a repertoire of alternative strategies can turn into an additional challenge for novice teachers who are just beginning to gain expertise as teachers. The discussion aims at the potential of reflective teacher research in early professional development in order to foster more sustainable motivational practices.

Due to accountability burdens and other pressures, teachers' focus on short-term task engagement seems to be a worldwide phenomenon (Deci & Ryan 2016). This study hopes to contribute to both teachers' and students' growth, vitality, and well-being by encouraging a new generation of teachers to nurture learners' inner motivational resources towards learning (Reeve 2009), such as cooperative self-regulation, curiosity and creative exploration.

Connecting research, policy and practice in teacher education in South Africa: a case study

Maureen Robinson, Stellenbosch University, South Africa

Since the advent of democracy in 1994, South Africa has formulated a range of education policies aimed at transforming the repressive historical legacy of apartheid and advancing equity and quality in education. The policy process has been relatively participatory, with many research and practice networks established across government and academic sectors. Whilst there has been a clear commitment to linking research, policy and practice in mutually beneficial ways, there has thus far been limited attention to theorizing and better understanding this link. This paper explores the connections and relationships between policy, practice and research in a teacher education research for policy intervention in South Africa. The intervention aimed to identify the policy and institutional conditions for establishing Professional Practice schools, seen as schools that would provide quality learning environments for student teachers on their practicum (Robinson, 2016).

The paper draws on the notion of "practice architecture" (Kemmis, 2009) to show how the conditions of research, policy and practice work relationally to support as well as conflict with one another. This framework makes explicit the ways in which different sectors think about, talk about, act upon and relate to the other sectors involved in the field of teacher education. Interviews, analysis of policy documents, and participant observation formed the three methods of data gathering. Interviewees were drawn from researchers who had worked in both academia and government, to allow for a nuanced and informed account of the discursive and material arrangements of these different domains. Participant observation by the principal researcher of educational forums, workshops, research networks and colloquia provided an insider perspective on the issue under investigation.

The findings highlight the arrangements between research, policy and practice in a particular teacher education research project in South Africa. Elements of this mapping are clustered using the practice theory framework of "sayings, doings and relatings" (Kemmis, 2009) and include elements such as discourses, expectations, activities, structures, tools and networks. The significance of the paper lies in its location in a setting where policymakers, researchers and practitioners in teacher education are – unlike in many other countries – already working relatively cooperatively. However, despite an assumption of broad agreement and cooperation towards a common goal, more research is needed to understand the actions, and interactions across these three domains. This will allow for deeper deliberation on the potential for systemic, sustainable and meaningful policy dialogue that can contribute to building an equitable and just education system in the country.

The Qualities of Effective Early Childhood Teachers: Perspectives of Stakeholders

Figen Sahin, Gazi University,Turkey; Arif Yilmaz, Hacettepe University, Turkey; Muge Sen, Ankara University, Turkey

Teacher quality is the one of the main concepts most widely referred regarding the quality of education around the world. Regarding teacher quality, professional standards (INTASC, 2013; NCATE, 2008) state that teachers should possess knowledge, skills and professional dispositions and these have a crucial role in children's learning and preparation for the school (Sheridan et al., 2009).

The quality concept is culturally and contextually bound and could have different meanings and attributes in different countries and cultures. Definition of quality can also change from past to present (National Research Council, 2001). Therefore, it is important to find out what constitutes qualities of effective teachers in early childhood education in Turkish context to acknowledge international literature. The purpose of this study is to explore the perspectives of stakeholders in early childhood education regarding the qualities of effective early childhood teachers. In this regard, in order to gain multiple perspectives teacher educators, administrators, pre-service teachers, in-service teachers and parents are

considered as the stakeholders for this study.

The study is conducted as a mixed-method study using both qualitative and quantitative measures. Sequential mixed method design (Creswell, 2016) is employed and qualitative and quantitative data are gathered respectively. In order to determine the perspectives of stakeholders on the qualities of effective early childhood teachers focus group interviews were selected as data collection tool. These interviews will be basis for the quantitative part of the study. For quantitative part, teacher educators, administrators, pre-service teachers, in-service teachers and parents are expected to fill out the "Qualities of Effective Early Childhood Teachers Questionnaire" that will be developed by the researchers based on existing literature and opinions of experts and the focus group results. Constant comparative method will be used for analyzing qualitative data from different groups. Data analysis for quantitative data will focus on determining the prioritized qualities for effective early childhood teachers.

The results of the study will inform national and international literature about how early childhood teachers' quality is perceived by Turkish stakeholders. The study has implications for teacher education programs and policy makers. Teacher education programs may benefit of the study to make revisions on their teacher education curricula and policy makers may use the results of the study for designing in-service training programs.

Understanding the Past – Building Tomorrow: Teacher Education in Times of Tyranny

John Exalto, Anja Swennen, Vrije Universiteit Amsterdam, Netherlands

The research we present is about Dutch teacher education for primary education (Teachers Colleges) during World War II (1940-1945). The focus of our research is on how teacher education related to the national-socialists educational policies and the consequences of the war and how the attitude of the Teachers Colleges is similar or different to other forms of education in and outside the Netherlands.

With few exceptions (De Vries, 2004; Van Essen, 2006; Neave, 1992; Swennen, 2012;) little attention has been given to teacher education in World War II. With this research we want to rectify this omission. The research may help to understand the experiences of teacher educators and schools and other educational institutions in time of occupation and tyranny.

Secondary sources that specifically deal with teacher education in WWII are limited and we gathered our data largely form primary sources such as archives and policy documents and from memorial books of teacher education institutions. We analyzed these data first by making a systematic historical overview in Excel and then by describing the main themes of our research.

We describe how teacher education institutes responded to the policies and pressures of World War II. The results show that only few Teachers Colleges actively resisted the occupation and few teacher educators took part in formal resistance groups. Also, only few heads and teacher educators of the Teachers Colleges were openly sympathetic with the Nazis – however data on this is obscured as the authors of memorial books do not or only in concealed words write about their colleagues who collaborated. On the whole heads and teacher educators followed the laws and rules of the occupier as well as they could while at the same time trying to hold on to their own beliefs about teaching. Most teacher educators took pride in the fact that they worked as long as they possibly could, even when school buildings were used by the military on both sides or destroyed.

We will conclude the presentation with lessons that can be learned from our study for teacher education of today and tomorrow.

Implementation of teacher certification examination: effects for universities and schools

Timirkhan Alishev, PhD in Sociology, Kazan Federal University, Russia

In 2011, the education system of Russia entered the Bologna process. New federal educational standards for higher education were approved. Along with other educational programs, the duration of initial teacher training programs was reduced from 5 (specialist degree) to 4 years (bachelor degree). Two-year pedagogical master degree programs were introduced. Educational legislation in Russia changed allowing one to work in school as a subject teacher after receiving at least a bachelor degree. In addition, in 2013 the Russian professional standard for teachers was developed. It determined the basic professional requirements for the pedagogical staff, what teachers are expected to know and be able to do. At the same time, the current Russian educational standards for the initial teacher training are not based on the teacher professional standard. The educational standards are using the vocabulary of knowledge and competences, and the professional standard is based on the vocabulary of specific professional actions and practice. Obtaining bachelor degree diploma in education means successful completion of educational program but does not say much about the graduate's readiness to effectively work in school. One of the evidences of the inconsistency is that only 30% of initial teacher training programs graduates in Russia come to work in schools and stay there for more than 3 years. This suggests the urgent need to increase the practical orientation of bachelor's programs and to bring the content of programs closer to the actual practice of teaching in schools.

Recently in a number of countries a certification examination for admission to the teaching profession was introduced. Such a mechanism enables the government to establish a single minimum standard of professional requirements for the teacher ensuring that only those who meet the standard are working in schoolIn 2016-2017 at the level of one of the regions of Russia – the Republic of Tatarstan – a teacher certification examination was introduced. The graduates of initial teacher training programs of two universities – Kazan Federal University (with two campuses in Kazan and Elabuga) and Naberezhnye Chelny Pedagogical University took part in it. Participation in the examination for graduates was voluntary but was actively encouraged by both the universities and the regional Ministry of Education.

In 2017, 235 graduates took part in the examination, which amounted to about 60% of the total number of graduates of the two universities that year. The examination consisted of a number of procedures requiring graduates to take a test, solve case problems and submit their lesson videos for expert review. Within the framework of certification procedures in accordance with the professional standard the graduate's ability to perform six sets of professional practices was assessed:

- planning a lesson;
- conducting a lesson;
- attitude towards professional development;
- ability to implement federal educational standards for schools;
- ability to differentiate teaching;
- ability to effectively assess students' learning.

After the analysis of the examination results certain graduate's professional deficiencies were identified. The average mark for the ability to implement federal educational standard for schools reached only 62, and the average mark for the ability to effectively assess students learning reached 68.9 on a 100 scale. Withal the well-established attitudes of the graduates to their own professional development and ability to plan their lessons were determined. Some other interrelations between the examination results and the peculiarities of teacher training programs were found. Recommendations to universities on changes in initial teacher training programs were made, as well as to schools on the implementation of mentoring programs for novice teachers. Some modifications to the examination toolkit were proposed.

New forms of education in Technical Vocational Education and Training programs

Runar Oudmayer, Steinar Karstensen, Oslo Metropolitan University, Norway

For the Technical Vocational Education and Training programs (TVET) there are clear guidelines from the ministry to promote knowledge, skills that contribute to a sustainable and inclusive society, the TVET Teacher Education(TVTE) for the will reflect this. The changes that take place in society are happening ever faster and are of greater importance to the rising generation and future professionals. A major contributor in this context is digitization, robotization and focus on the green shift.

An example of this is that in Norway it is politically stated that from 2025 only electric cars will be sold. To educate a skilled worker takes 2 years in school and 2 years as an apprentice, meaning that the students who start school in 2021 will mainly relate to electric cars as opposed to the cars powered by fossil fuels. A teacher education for these students takes three years, which means those who start up in the fall of 2018. In order to ensure a future sustainable society, we must educate skilled workers who are able to solve the challenges we face. Skilled workers will increasingly meet technological challenges and the teaching must be organized with good didactic teaching plans to meet this need. This implies that teacher education must adapt and prepare teachers for this.

The government has expressed a clear wish to strengthen cooperation between the trades and TVET. In this article we will look at guidelines for future TVET subjects. By doing an analysis of the reports and investigations that have been done, and review these against existing curricula. We will also interview some relevant industry actors to get an idea of what they think in the future. This will be the first insight into a major R & D work that will take care of both organization, content and development of vocational education in the use of robotization and additive production. There will be four areas that will be the main focus: (1) Cooperation education and working life (2) Didactic approach to training of new technology (3) curriculum development for future technology and (4) Dropout issues in vocational education.

The article will contribute to a clearer definition of the interaction between knowledge, technology, learning and on relationships between technology and learning in the trades and what this means for TVET.

It is expected to find indicators that can help us show a better didactic approach for technology training. Including learning methods that may be appropriate to form the basis for a general basic competence related to future technology, tool understanding and trade practice.

Unemployment, vocational guidance and entrepreneurship education as correlates of graduates` post-vocational training for self-reliance in delta state, Nigeria

Emmanuel Tibi, Pauline Tibi, College of Education, Nigeria

Unemployment amongst tertiary education graduates in Nigeria is very high and continues to rise, with more graduates being churned out annually. Alarming statistics are released daily about Nigerian youths dying while crossing the Sahara Desert, drowning in the Mediterranean Sea, being maimed or sold in Libyan slave markets or being forcefully deported in their thousands. Over 75% graduates of tertiary institutions in Nigeria are adjudged unemployable. To stem this social malaise, institutions are using vocational guidance and entrepreneurship education to re-orientate graduates to acquire vocational skills for self-reliance and entrepreneurship. Presently, graduates are engaging in N-power training programmes, vocational training in technical colleges, YAGEP, STEP and skill acquisition under thriving entrepreneurs. The purpose of this study was to assess the relationship between graduate unemployment, vocational guidance and entrepreneurship education, and post-graduation vocational training by graduates in Delta State. This correlational study used a survey design to obtain data from respondents. Three research questions and one hypothesis were raised. Study population comprised of unemployed graduates undergoing vocational training. Purposive sampling procedure was used to select two Local Government Areas from each of the three senatorial zones of Delta State. A questionnaire titled "Factors Responsible for Post-graduation Vocational Training Inventory" was administered to 272 respondents. Random sampling technique was used to select respondents at their training centres. Data were analyzed using means, standard deviation and multiple regression analysis. Results showed that all three factors were relevant to respondents' post-graduation vocational training. While unemployment pressure and entrepreneurship education were significant predictors, vocational guidance was not. Skills acquisition and regular vocational guidance should be incorporated into entrepreneurship education in tertiary institutions.

Issues in professional learning: experiences in the PROLEA-project and beyond (An Erasmus+ project the RDC is involved in)

Jaap van Lakerveld, Leiden University, The Netherlands. Brigita Zarkoviz, Mhairi Beaton, Susan Huber, Rita Schilwacht, Christiane Kose, Quinta Kools

The members of the RDC on in-service learning wish to deliver a workshop, or rather a carousel kind of experience to those who are interested in continuing professional development and learning of teachers. The workshop will consist of a common introduction to all on professional development. Development is an autonomous or self-regulated process, and at the same time an activity of those who wish to promote development among others, in our case teachers. The first part of the workshop will serve as a brief introduction into the carousel part in which the members of the RDC will each deliver one way to promote professional development. Jaap van Lakerveld will deliver a general introduction to professional development followed by a presentation by Brigita Zarkovic who will outline an approach to professional development. This approach is the basic model behind a project named PROLEA. The RDC is currently involved in a project to promote professional learning of teachers in our changing society. Members of the project will outline and discuss four elements in our approach are:

- What are the challenges of the complex context in which teachers currently have to operate and what do these complexities imply for their work and their own development (Jaap van Lakerveld).
- Portoflio as a means of creating professional development record. How to create your own portfolio scheme to help you reflect (Christiane Kose).

- Video feedback to assist and support teachers in their professional actions and the enhancement of these actions (Rita Schildwald).
- Changing professional identity through transnational professional learning (Mhairi Beaton).
- Teaching migrant classes and how to introduce the topic to teacher education (Susan Huber).

The contribution on each issues will be offered parallel and two times in a row. Participants may take part in two activities they select. In the end, we will engage them into a dialogue among all participants to harvest and share the overall outcomes of the carousel experience.

Thus, we will disseminate our project experiences and connect participants to acknowledge their inputs into our processes. Participants will be invited to contribute, and we as project members will do our best to contribute to what they wish to gain from the experience. This mutual dialog serves as an example of how professional development may be mutual beneficial experience that promotes professionalism among all concerned. The workshop will be rounded up by summarizing key element of the discussions in the subgroups and by linking the findings to our next project on professional development.