



TEPE 2023 BOOK OF ABSTRACTS



1. TEPE 2023 Abstract submission

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Abstract title: Does context matter? The influence of context factors on teacher agency, professional knowledge and the implementation of ESD at schools

Theme: Continuous professional development in times of change

Keywords: *ESD, context factors, teacher agency*

Abstract

The objective of our study is to explore differences in ESD related school development. We thereby focus on context factors influencing teacher agency and professional ESD knowledge in order to participate and engage in implementation processes of ESD. Research shows that teacher action is informed by three contexts: theory, practice/experience and the teacher's social context in addition to peer support. Context factors can both be sources of pressure and sources for improvement.

Our qualitative study focuses on schools and teaching staff at Freiburg, well known as the "Green City" in the south of Germany. As the city's most recent educational monitoring report shows, there is a high level of ESD activity in the region. Given the high awareness of sustainability issues and the wide range of ESD actors in the city, it could be assumed that all kinds of educational institutions, including schools, are actively engaged in ESD, mutually influence each other through effective networks and provide the contexts to promote ESD at various levels and institutions. But the reality shows a mixed picture and there is no systematic knowledge about schools' ESD activities and the context factors supporting or hampering ESD processes at school level.

In a first step, we therefore analyze websites of schools in Freiburg at all levels and map them according to their interaction within the local context. In a second step, we select schools and conduct semi-structured interviews with teaching staff as well as headmasters and ESD facilitators to reconstruct their implementation process of ESD in order to identify and explicate context factors significantly impacting on teacher's agency and professional knowledge as both a resource for support and a source for pressure to improve a school in the sense of ESD.



2. TEPE 2023 Abstract submission

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Abstract title: Innovative work and Continuous Professional Development of Polish Teachers in the context of Online Education

Theme: Continuous professional development in times of change

Keywords: *Polish teachers, online education, continuous professional development*

Abstract

The effectiveness of teachers' delivery skills is one of the most significant indicators of students' learning outcomes, according to a growing body of literature (e.g. Gaertner and Brunner 2018; Scherer, Nilsen, and Jansen 2016; Yang et al. 2014). Therefore, establishing professional development opportunities for teachers might be a suitable strategy to enhance teaching effectiveness and, as a result, students' learning outcomes (Zhang et.al., 2021). On the other hand, the COVID-19 pandemic focused our attention on how important the school preparedness and teachers' readiness for changes is (Madalinska and Raykov, 2020).

This study is a continuation of country-cross research with the use of online survey conducted by Madalinska and Raykov (2020) titled "The Changing Nature of Work and a Need to Prepare Teachers for Involvement in Innovative Work During and After the Pandemic". The research attempted to look at teachers' interests and participation in innovative activities at school, as well as their interest in continuing their professional development in the domain of innovative work. The current study uses online focus group interviews for data collection in order to gain insights into the experiences and further explore teachers' reflections on their innovative work and continuing professional development in the context of online education. The study participants are teachers who agreed to participate in the second phase of data collection of the project. It is planned to collect data from about 18-20 secondary school teachers (grouped into three focus group interviews). It is expected that we will learn about teachers' best practises and challenges, as well as the impact of their knowledge from online education as part of CPD. These research findings will seek to contribute to the assessment of knowledge transfer of secondary school teachers in Poland who will advocate for further improvements in the institution.



3. TEPE 2023 Abstract submission

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Abstract title: The contribution of the developmental educational model of supervision to the professional development of teachers and students

Theme: Continuous professional development in times of change

Keywords: *supervision, learning, changing, professional development*

Abstract

Introduction: the process of supervision represents one of the possible processes of lifelong learning and adult development. In this paper we present some features of supervision as a specific developmental pedagogical and supportive method of professional development and reflection. A particular focus is on explaining the relationship between personal and professional development through supervision and its integration into what we call a "professional self" that we have explored in a group of students and a group of teachers.

Aim: to determine what the participants in the supervisions (students and teachers) perceive to be the contribution to themselves and their professional development from supervision meetings.

Method: qualitative research was conducted in two groups using two methods: a) in the group of students from the Faculty of Education, University of Ljubljana (127 students) we conducted a qualitative analysis of the texts of their written reflections written after each of the 8 supervision sessions, b) we conducted a focus group with a group of 6 teachers who had participated in intensive supervision sessions in the past (2 to 6 processes with 15 sessions each).

Results and implications: Despite its limitations (the study's conclusions cannot be generalised because it was conducted on selected samples), the study offers some insights into students' and teachers' beliefs about supervision.

We can conclude that supervision is important primarily for students as a form of entry into the profession (by raising awareness of what supervision is and the importance of ongoing professional development), while for those who are already working, supervision provides a number of other benefits (reflection on work, support, professional and personal growth, etc.).



4. TEPE 2023 Abstract submission

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Abstract title: Motivational Interviewing as Professional Development in Schools

Theme: Continuous professional development in times of change

Keywords: *motivational interviewing, intervention, professional development, teachers*

Abstract

Introduction: The teacher-student relationship is significant for students' motivation and affects students' academic outcomes. However, teachers and pre-service teachers have described relational work with students as the most difficult part of their profession. Motivational interviewing (MI) is a collaborative communication style used to enhance individuals' motivation, and has gained attention as a useful method in schools. However, there is a lack of intervention studies where teachers have specifically been trained in MI, as part of their continuous professional development.

Purpose: This study aims to explore teachers' experiences from participating in an MI-based intervention, which aims to strengthen teachers' relational approach and promote students' motivation.

Method: In this intervention study, Swedish secondary school teachers has been trained in school-based MI. The MI-training was delivered in five workshops during one semester. Four qualitative focus groups interviews were conducted with 23 teachers who had participated in the intervention, they taught in different subjects in grades 7–9. A qualitative content analysis approach was used to analyse the data.

Preliminary findings: The teachers considered that MI had given them concrete tools to use when interacting with both students and parents. Teachers highlighted that the MI-training has provided them with a common pedagogical platform which in turn created more fruitful educational discussions with their colleagues. However, the perceived lack of time made it difficult to implement and apply MI in schools. The teachers emphasized that MI should be an element in teacher education, in order to give newly educated teachers better conditions for building relationships with students. This study can be a valuable contribution to the field of teacher education research, since teachers need a wide range of pedagogical strategies to be able to cope with the challenges in their profession, for which MI may be a useful professional tool.



5. TEPE 2023 Abstract submission

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Abstract title: An exploration of teacher leadership in initial teacher education: Are future teachers ready to lead?

Theme: Continuous professional development in times of change

Keywords: *teacher leadership, pre-service teachers, professional development, school improvement*

Abstract

Teaching profession has become increasingly more complex in the last decades. The changing role of teachers has called for a new paradigm of teaching profession which recognizes the potential of teachers to lead for supporting school development and change. The influence teachers have on the school community, and their commitment for school change are at the core of teacher leadership definitions. Preparing future teachers to act as leaders in their schools can support the overall efforts for school improvement. Hence, the purpose of this study is to explore pre-service teachers' perceptions and readiness for teacher leadership. The study will utilize a mixed methodology to answer the following research questions:

- How do pre-service teachers conceptualize teacher leadership?
- How does initial teacher education shape the understanding of teacher leadership for school improvement?
- How does initial teacher education contribute to pre-service teachers' readiness for exercising leadership roles for school improvement?

The participants of the study will be pre-service teachers in the bachelor studies enrolled at the Faculty of Education, University of Prishtina. The study will use a questionnaire developed based on literature review, tackling the following dimensions: values and beliefs, interpersonal skills, collaborative proficiencies, and continuous professional development. Also, interviews will be conducted with 15 pre-service teachers to discuss in depth the core elements of teacher leadership in order to better grasp the pre-service teachers' understanding of this concept as well as their readiness to exercise leadership roles. Snoek et al. (2019) model will be used as an analytical framework to determine the development of teacher leadership in initial teacher education.

The findings of this study would have imperative implications for providing good models of initial teacher education that support the preparation and readiness of future teachers to tackle the ever-increasing complexities of the teaching profession.



6. TEPE 2023 Abstract submission

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Abstract title: ~~'The goal posts shift all the time': School networks supporting teacher professional learning in a constantly changing world~~

Theme: Continuous professional development in times of change

Keywords: ~~Teacher professional learning, school networks, communities of practice~~

Abstract

A significant body of literature has developed internationally on school networks. This paper presents findings from original research on two DEIS^[1] school networks in Ireland (Bourke 2022) and the role that they play in supporting individual members and schools to develop knowledge and practice to respond to evolving social issues.

A qualitative research design was employed, utilising an exploratory, instrumental case study (Stake 1995). Data collection involved focus groups, individual interviews and surveys with network members and documentary analysis of minutes of meetings. The Conceptual Framework draws on education policy, literature on school networks, social theory on the reproduction of inequality in education, social capital theory and the social learning theory of Communities of Practice.

These networks display properties of 1) school networks (Muijs et al. 2011; Rincón Gallardo and Fullan 2016; Azorín et al. 2020) that support schools to respond to change e.g., changing demographics and diversity and 2) Communities of Practice (Wenger 1998; Wenger-Trayner and Wenger-Trayner 2015) that enhance teacher professional learning (TPL) through an informal, social learning process. While not recognised as 'transformative' TPL (Kennedy 2005 and 2014; Rincón Gallardo and Fullan 2016), they can be viewed as part of a 'divergent' (Stoll 2010, p. 472) approach to TPL through the 'social formation' (Pyrko et al. 2017, p. 351) of network members' professional identities and by supporting DEIS schools to develop networked agency (Hadfield and Chapman 2009) and 'interrupt' the politics of redistribution and representation (Apple 2013, p. 165). This paper discusses these findings, reflecting on the importance for teacher education policy more broadly.

[1] Delivering Equality of Opportunity in Schools (DEIS), is the Action Plan for Educational Inclusion, launched in May 2005. It is the Department of Education policy instrument to address educational disadvantage in Ireland. The second Action Plan was introduced in September 2017.



7. TEPE 2023 Abstract submission

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Abstract title: Internationalization at Home – a greater ability to integrate intercultural dimensions into teaching

Theme: Continuous professional development in times of change

Keywords: *Internationalization at Home, intercultural competencies, teaching for diversity, sustainability*

Abstract

This paper aims to examine how Internationalization in teacher education comes forth through the course plans and the teaching plans in the study programs, and how the students get prepared for and develop intercultural competencies. Based on the growing interest in internationalization in Higher Education (HE) generally and teacher education specially, we aim to identify how study plans, course plans and teaching plans support student mobility and internationalization at home. In the paper, we also want to pay attention to the importance of sustainable education and teaching for diversity.

There is a call for more inclusive, ethical, and qualitative internationalization in HE and the need to increase the scope of involvement in internationalization. Students' mobility has had problems taking root in teacher education (Pedersen, 2021), which results in few students traveling abroad. With this background, we wish to promote internationalization at home as an alternative to student mobility. Internationalization at home is a targeted integration of international and intercultural dimensions for all students (Beelen and Jones, 2015).

The study has a qualitative approach. The data is based on document analysis, of a selection of course plans and teacher plans for primary school teacher education grades 1-7 and 5-10 at one of the teacher educations in Norway.

Preliminary results show that student mobility is more explicitly stated through the study plans, and the course plans. Internationalization at home is more prominent in the teaching plans. In order to find alternatives that take care of the students' potential to develop intercultural competence and intercultural mindset, we see it as necessary to promote internationalization as a theme throughout the study programs.

The underlying aim of this paper is to contribute to strengthening the study program's and the teachers' competence on Internationalization at home towards a more sustainable teacher education.



8. TEPE 2023 Abstract submission

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Abstract title: Using interconnected model of teacher professional growth to trace changes in teacher leadership through a feedback cycle

Theme: Continuous professional development in times of change

Keywords: *teacher leadership, teacher change, professional growth*

Abstract

Teachers as a leader have an important role in shaping other teachers' professional learning in the school. There are some studies that define and examine teacher leadership (TL) qualities (e.g. Hunzicker, 2017, 2019; Liu et al., 2021; Poekert et. al. 2016). However, few studies focus on how teachers become a leader.

This study examines this process during a professional development (PD) program designed to improve middle-school teachers' leadership roles by using Poekert et al.'s (2016) TL framework. We designed a four-week long PD in which teacher leaders practiced providing feedback for unit plans prepared by their colleagues (1st cycle). In live feedback meetings and via an asynchronous, shared document, they received constructive feedback from experts through discussions and in-depth analysis. In the 2nd cycle, the teacher leaders were challenged to give targeted feedback to another unit plan considering unit plan feedback standards/criteria and their knowledge from the 1st cycle.

We used the Interconnected Model of Professional Growth (IMPG, Clarke & Hollingsworth, 2002) to explore how teacher leadership was built through interactions among experts, plans, and other leaders by recognizing the complexity of professional growth and identification of multiple growth pathways. Through recorded meetings and reflection forms sent to the six teacher leaders and six teachers who received feedback from their teacher leader, our preliminary results showed that the teachers' interaction with the expert led not only to a change in growth as a teacher by developing their design skills but also to a change in their growth as a leader. While teacher leaders didn't feel like leaders during the 1st cycle, they gained this skill over time. The growth networks identified so far have shown that teacher leaders improved in choosing appropriate leadership methods for teacher development. Analysis of qualitative data is still ongoing.



9. TEPE 2023 Abstract submission

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Abstract title: Exploring the relationship between coaching and employability competences: preparing students for workplace learning

Theme: Continuous professional development in times of change

Keywords: *Coaching, Employability competences, Workplace learning, Higher education*

Abstract

More than half of the graduate employees leave their first job because they fail to adjust to the workplace. This is especially a pressing issue for sectors that already deal with personnel shortages, such as the education sector. To successfully adjust to the workplace, graduate employees need to engage in workplace learning, defined as learning on the job. However, a lack of employability competences, such as lifelong learning skills, can hinder graduate employees' learning at the workplace. To prepare students for learning at the workplace, higher education (HE) has implemented coaching trajectories aimed at supporting students in developing employability competences. The present study explores the relationship between coaching and employability competences and students' learning process within these coaching practices, using a multimethod approach. Data were collected via student surveys (N= 491) and interviews with coaches (N= 9) from HE institutions in the Netherlands and Belgium. Our quantitative results show a significant positive relationship between autonomy support provided by the coach and the development of students' employability competences. Focusing on the student's learning process, the interview findings reveal that during a coaching session, coaches support the development of employability competences by encouraging students to engage in trial and error and by stimulating their reflection on their own development. Based on our results, we recommend more HE institutions to implement coaching trajectories to prepare students for work-related learning. We conclude this study with practical guidelines on how coaches can best support students in the development of their employability competences and their learning process. A limitation concerns our qualitative data. We conducted interviews with coaches about students' learning process of employability competences. Although the coaches might have a good understanding of when students learned during the coaching sessions, including the student perspective might have led to more insights about their learning process.



10. TEPE 2023 Abstract submission

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Abstract title: Understanding the complexity of professional development in schools through Causal Loop Diagrams

Theme: Continuous professional development in times of change

Keywords: *professional development of teachers, causal loop diagrams, wicked problems*

Abstract

Changes, challenges and expectations of society call for ongoing professional development of teachers. However, in many schools ongoing professional development cannot be taken for granted. Many governmental, local or institutional policies aim at stimulating teachers' professional development, but many of these policies have a limited impact. To reach a deeper understanding of this problem causal loop diagrams (Salmon et al, 2022) can be helpful as they visualize how different parts and processes in an organisation are interrelated and either strengthen or weaken one another. Causal loop diagrams originate from the field of system thinking where they are used to understand wicked problems in complex systems (Bore & Wright, 2009; Groff, 2013; Vermaak, 2016). Causal loop diagrams can illustrate how elements like the structure of the profession and of schools, cultures in schools, collegial dynamics, etc are interconnected and can reinforce each other in a positive or negative way.

From our observations in schools and from many discussions with teachers and school leaders we developed causal loop diagrams and validated these in literature. Our next step will be to validate the causal loop diagrams in practices in schools through focus group interviews in a variety of schools.

In this session we will present some of the causal loop diagrams we developed, the patterns they illustrate and the underlying theory that support these patterns. Additionally, we will discuss to what extent these patterns are unique for the Dutch context in which we developed them, and the extent in which they can also be recognized in other countries and contexts. Finally we will discuss the way in which working with causal loop diagrams can support teachers, schools and teacher educators that collaborate with schools to identify patterns that hinder a systemic approach for ongoing professional development.



11. TEPE 2023 Abstract submission

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Abstract title: Quality Initial Teacher Education in the Grip of Teacher Educator “Academic Tribes and Territories”

Theme: Continuous professional development in times of change

Keywords: *teacher educator academic tribes and territories, quality initial teacher education, professional embeddedness, tacit knowledge*

Abstract

Examining quality in initial teacher education is considered a complex task. One dimension of this complexity is examining teacher educators as key stakeholders for ensuring quality in initial teacher education. However, the influence of teacher educators in improving the quality of initial teacher education seems to be still under-researched. The main purpose of this paper is, thus, to examine how teacher educators lead the understanding and improvement of quality in initial teacher education. In our title, we refer to the iconic work of Becher and Trowler (2007) on “academic tribes and territories” as a theoretical framework to examine teacher educators positioning in different academic tribes and territories and how that reflects the process and outcome of improving quality in initial teacher education. This is a qualitative study that reports interviews conducted with management staff (n = 6, 15 interviews), teacher educators (n = 15, 28 interviews), and student teachers (n = 15 group interview) in initial teacher education institutions in Kosovo. Findings show that teacher educators leading quality improvement is characterized by many tensions and contradictions that originate from three main aspects that distinguish professional formation and embeddedness of teacher educators into isolated academic tribes and territories, including (i) discipline, (ii) teaching and research experience, and (iii) organizational culture influence in teacher educator professional development. The study endorses that improving quality in initial teacher education systematically requires institutions to recruit and support teacher educators to have a broad mandate, an expansive worldview, a collaborative and research-based approach, and the skills to enact a rich curriculum. The study concludes by endorsing a teacher educatorwide socialization matrix that could contribute to extending teacher educator professional development context by stimulating the formation of collective values and cultures towards a teacher educator-led improvement of quality in initial teacher education.



12. TEPE 2023 Abstract submission

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Abstract title: Teacher Shortage in Sweden – from professionals' view.

Theme: Continuous professional development in times of change

Keywords: *Mixed method, professionals' view, Sweden, teacher shortage*

Abstract

The supply of teachers in Sweden is seen today as a challenge of historic proportions (Bertilsson, 2018). However, the lack of teachers is not only a Swedish problem but exists largely in all European countries (Federičová, 2020) and in the USA (Garcia & Weiss, 2020). The proportion of fully trained teachers must increase by just over 50% until 2035. The imbalance will thus continue for many years to come. The shortage of certified teachers varies greatly between school forms, between 25 and 85%, where the largest shortage is within special schools. Teacher shortage can be traced back at least 50 years, and the causes are many and complex. For example, many different reforms, deteriorating conditions, low status of the profession, and New Public Management as a management philosophy have had strong impacts (Boström et al., 2021). Researchers and policymakers have described the problem, but not the professionals who work in schools.

This study is based on an online survey answered by 600 school practitioners. It will use an exploratory sequential mixed methods design (Creswell, 2014) and analyze the answers with analytical statistics and content analysis. (The empirical material is currently being analyzed). Expected outcomes related to research will be the research contribution of the scientific novelty of new knowledge in teacher shortage from a national perspective. Expected outcomes are also a variety of answers depending on the profession, but also a unique overview of the perceptions from main actors, and staff in school. The results will show why teachers and teacher students want to stay, why they quit or change jobs, what explanations they have for the teacher shortage, and their proposals for how to address the problem. The results may also shed light on which strategy leads to teachers staying in their profession long-term and how to improve teacher training.



13. TEPE 2023 Abstract submission

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Abstract title: Transforming Knowledge in teacher Education Through Decolonial Praxis

Theme: Continuous professional development in times of change

Keywords: *decolonial, praxis, anti-racism, continued professional development*

Abstract

This paper presents on how teachers in the UK are framing their approaches to anti-racist curriculum making through decolonial praxis. We draw upon data from teacher interviews and findings from two impact case-studies; 1) continued professional development (CPD) materials developed by the Chartered College of Teaching, UK, through their Decolonising and Diversifying the curriculum course; 2) the creation of an online network (UK) for history teachers, with a focus on decolonising curricula and practices through methods of co-production. Findings from both case studies indicate that teachers' access to robust evidence informed continued professional development tools for anti-racist curriculum making give pedagogical confidence in challenging and transforming the limitations of knowledge given by the myopic Eurocentric discourses of the national curriculum. Decolonial praxis enables teachers to plan and implement approaches to pedagogy framed pluralistically by a diversification of knowledge in curriculum making.



14. TEPE 2023 Abstract submission

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Abstract title: The bond between student teaching practice and mentoring: does mentor matter?

Theme: Continuous professional development in times of change

Keywords: *mentoring, student teaching practice, initial teacher education*

Abstract

Mentoring as a continuous experience that happens during student teaching practice is seen as a developmental process for both mentor and student teachers. Knowing that rapid changes affected in all spheres, teachers who were assigned as mentors responded in order to increase quality in their mentoring approach. The aim of this study was to explore that affect during the student teaching practice that happened for six weeks. Although there were many concerns about the student teaching practice in general, findings from the qualitative data show that mentoring is a developmental experience for mentor in which they previously are trained and prepared, and also for student teachers who tend to bridge the gap between theory and practice and prepare themselves for teaching profession. This study also indicates that constructive feedback and communication during this experience are very important for students who want to inherit this profession.



15. TEPE 2023 Abstract submission

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Abstract title: Promoting preschool student teachers' democratic agency

Theme: Continuous professional development in times of change

Keywords: *Teacher agency, democracy and fundamental values, preschool teacher education, horizontal networks*

Abstract

These results derive from a project on preschool student teachers' professional development. The basic idea was that issues of democracy – discussed and talked about in different forms and contexts – are vital to become part of teachers' agency. Thus, the project aimed to explore how the student teachers developed democratic agency during their teacher education.

Theoretically, the project was grounded in an understanding of teacher agency, in which experiences, different contextual aspects as well as temporal dimensions are taken into account. For 7 semesters, a group of 10-20 preschool student teachers in Sweden participated voluntarily in the project throughout their entire teacher education. Our method was to gather regularly in conversations with the students in 'horizontal networks'. These worked as arenas for the students to challenge their thoughts on democracy and values without being graded for their developing opinions. We were four researchers that, in about 70 occasions, met with the students in such conversations about their future profession. Our roles were to take part of reflections on issues of democracy and teaching profession.

Our main results show that the students developed democratic agency though active participating in horizontal networks. The students themselves were able to describe the value of participating and how they perceived their democratic agency to be more developed compared to non-participating fellow students. The students in focus were able to reflect on issues of democracy in society, how they possibly could act differently in situations with children, colleagues and other actors in the preschool, issues that in previous research have been found to be difficult.

The results demonstrate a need to clearly focus on issues of democracy in the teacher education in order to develop future teachers' democratic agency, which doubtless has become even more necessary in the present democratically troublesome times.



16. TEPE 2023 Abstract submission

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Abstract title: Ressurrection of School Informatics in Estonia: Impact to Teacher Education

Theme: Knowledge transformation in subject-specific research and comparative studies in education

Keywords: *informatics; teacher education; flexibility; curriculum*

Abstract

Informatics is one of the youngest school subjects in Estonian national curriculum that was introduced during Gorbachev's perestroika in all Soviet schools since 1986. While in the beginning it was quite theoretical subject based on academic computer science, its goals, contents and implementation was changed radically in the first national curriculum reform of newly independent Estonia. Instead of programming, data structures and algorithms, informatics focused on basic digital literacy since 1996. Although this change lowered the barrier for new teachers considering specialisation in this subject area, it resulted with gradual disappearance of this subject from schools. Instead of having a separate IT-subject, majority of Estonian schools decided to integrate digital competence development in other subjects. By 2017, less than 40% of Estonian schools reported availability of informatics subject in their curriculum (Praxis, 2017) and universities have stopped informatics teacher education due to low number of applicants (Laanpere, 2018). This fact caused alarm in local IT industry and policy makers who introduced a new funding mechanism for re-introducing informatics under IT Academy program. Teacher education programs were re-opened, re-designed, incentivised by generous scholarships since 2018 in Tallinn University and University of Tartu. Four years later (at the end of 2022), we conducted school survey to find out the impact of this policy intervention and find out the future need for qualified informatics teacher education. This paper reports on the results of this study, which are encouraging in some areas, yet maintaining uncertainty in other directions. While we managed to stop the further decline of the subject and slightly increase its availability in schools, 5-year prediction made by school leaders and teachers shows decreasing trends in needs for new qualified informatics teachers. Our results fuel a discussion on potential solutions for increasing flexibility of paths towards and formats of informatics teaching qualification.



17. TEPE 2023 Abstract submission

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Abstract title: Transformation of the Physical Education teacher's role and mission from pupils' perspective

Theme: Knowledge transformation in subject-specific research and comparative studies in education

Keywords: *Content knowledge, PE teachers, Physical Education [PE], pupils' perspective*

Abstract

Introduction

There is a significant gap of knowledge about pupils' experiences of Physical Education [PE]. Sport, exercise and health are important factors in pupil's well-being. Pupils who exercise sleep better, have more energy, learn to cooperate and perform better at school. PE teachers are key players in the pupils' vision of the future of health and PE as a social investment.

Purpose

The purpose of this study is to contribute to new knowledge and a deeper understanding of PE based on pupils' perspectives on the role of the PE teacher.

Method

The empirical material consists of interview data from eleven focus group interviews with 62 pupils in grade 9, from eight different secondary schools. Qualitative content analysis was used, with social representation theory as theoretical perspective.

Key findings and conclusion

Pupils talk about not having any influence in PE, which reduces their motivation and participation. Pupils feel uncomfortable and not listened to by their PE teacher. They want more variety so that content can be adapted to suit everyone. Pupils highlight that they feel insecure when expected to perform activities when classmates are watching and/or the teacher is filming for assessment. They want a fairer and safer environment. Pupils also made suggestions for transformation regarding content and form and how their visions of PE could improve learning.

Respecting the pupils' perspectives on these issues would have a positive effect on pupils' and PE teachers. Today it's a greater focus on sport, exercise and health as important elements for students' well-being. This makes the PE teacher a particularly important resource who needs extra support to fulfill his/her multifaceted mission. The study contributes to knowledge development in teacher education and especially for PE teachers and PE pupils.



18. TEPE 2023 Abstract submission

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Abstract title: Implementing the concept of Action Competence to teach and learn about global issues

Theme: Knowledge transformation in subject-specific research and comparative studies in education **Keywords:**

Action Competence, Biodiversity, Sustainability

Abstract

Today's teachers face the challenge to educate about global issues that go beyond single disciplines. One of these major global issues is the decline of global biodiversity, which has received much attention in the last years. Educating about such concrete sustainability issues is highly relevant and innovative ways of education going beyond the transfer of theoretical knowledge are necessary. Action Competence provides a promising theoretical framework to educate about sustainability issues by focusing on developing learners' action-oriented knowledge, confidence, and willingness to take concrete actions. The presented study is the first to apply this general concept of Action Competence to a concrete issue within biodiversity decline. This application not only led to a new specified framework, but also to a theory based teaching intervention that was implemented and tested in regular science classes of four compulsory schools in Sweden.

At the TEPE conference, we will focus on general transferable conclusions for teaching and teacher education that can be drawn from this implementation. These conclusions build on an investigation of a variety of sources (theoretical backgrounds; measurement of students' self-perceived action competence; field notes from teaching observations and teacher workshops; interviews with involved teachers and students). The project shows that Action Competence is well applicable for the design of powerful teaching interventions on global sustainability issues, leading to significant increases of students' self-perceived knowledge, confidence, and willingness to act. There are also challenges for implementation, such as time restrictions, dealing with complexity, teachers' insecurities, and structural limitations. The project provides practical insights how action competence can support teachers and teacher educators in approaching challenging and complex global issues.



19. TEPE 2023 Abstract submission

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Abstract title: Middle school pupils' understanding of bacteria and virus in the aftermath of Covid-19

Theme: Knowledge transformation in subject-specific research and comparative studies in education

Keywords: *contagion literacy, Covid-19, health literacy, primary education, students' conceptions*

Abstract

For the past couple of years, the COVID-19 pandemic had an immense impact on lives of individuals and societies around the world. The main purpose of this study was to delineate Swedish middle school (10-12-year-old) pupils' understanding of bacteria and virus thereby illustrating the impact of the pandemic at schools and in society. Data were collected by semistructured, individual interviews and by asking participants to draw images of bacteria and virus. Thematic coding and content analysis of children's annotated drawings were used. The morphology of the microorganisms from the drawings was analyzed by the deductively induced themes shape, surface texture and internal feature. Viruses were frequently considered larger than bacteria, but it was also common to view them being similar in size. Interrelationships between bacteria and viruses were expressed like a hierarchy with a "superior" microorganism, and as bacteria could generate viruses. Pupils drew microorganisms as cell-like and never portrayed them as animals or with anthropomorphic features, as reported in earlier research. Metaphoric aspects of drawings of viruses were summarized as being "bacteriophage-like" or "corona-like". A virus was considered to induce the more grievous disease. Pupils seldomly tethered a specific virus to a specific infectious disease, and often named both "corona". However, when they did so, virus was tethered to flu and COVID-19 and bacteria to cold and plague. One ostensible suggestion for learning improvement would be to pay more attention to differences between microorganisms and their liaison to specific infectious diseases. This liaison is suggested as an important concept for developing contagion literacy. Furthermore, we recommend pathogenic bacteria and viruses to be explicitly taught in biology education at middle school or earlier in balance with knowledge about essential microorganisms. Finally, we propose the measures above to be integrated into the biology education of teacher's education.



20. TEPE 2023 Abstract submission

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Abstract title: Engaging Rural Vocational Boys in Reading. Teaching and Learning About Reader Identities

Theme: Knowledge transformation in subject-specific research and comparative studies in education **Keywords:**

Reading, Boys, Rural, Place, Literacy

Abstract

This study reports findings from a reading project with a focus on *the reader*, which has been carried out in collaboration with a Swedish teacher at a vocational upper secondary school. Rural vocational boys are often described as reluctant readers, and the study is about how their narrated experiences of reading can provide knowledge about reader identities and local reading practices, and how these can be used as subject content in Swedish education. Based on a narrative research tradition that sees narratives and narration as important resources in the work of developing teaching (Goodson, et al., 2010; Goodson & Gill, 2011, 2014) the study also aims to contribute knowledge about what a reading instruction that takes its starting point in such local reading practices does to vocational students' narratives about themselves as readers.

Data consist of topical life story interviews with 19 vocational male upper secondary students. Taking an ecological perspective on literacy (Barton & Hamilton, 1998/2012; Green & Corbett, 2013) which emphasize the interaction between readers, context and reading as a social practice, the results indicate an existing gap between reading practices in school and the more informal reading practices the boys engage in outside school (cf. Asplund & Goodson, 2022; Scholes & Asplund, 2021). Our analysis also shows that the boys have strengthened their identities as readers when their own reading practices and stories have formed the starting point for the reading instruction they encountered. The boys' stories open up for didactic discussions about reading as a generic and subject-specific ability which is to be taught and learned in all subjects. Therefore, knowledge about reading is also expected to be taught and learned in teacher education.



21. TEPE 2023 Abstract submission

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Abstract title: Collegial Planning and Preparation as Subject-didactical School Improvement

Theme: Knowledge transformation in subject-specific research and comparative studies in education

Keywords: *professional development, school development, planning and preparation*

Abstract

Planning and preparation (PaP) are vital for high-quality teaching and thus for student learning. Nevertheless, the infrastructure to support teachers' PaP is often poorly developed. This project brings together the fields of subject didactic and school development in order to investigate PaP as part of an organised infrastructure and as qualified activity.

We focus how infrastructure can be organised to support PaP in sustainable ways for professional development, efficient for transforming knowledge into relevant teaching activities, and is systematic and dialogic in its formative approach. The aim is to develop knowledge about a didactical collegial practice as well as about its role in the local school infrastructure.

Our research-based hypothesis is that teachers PaP benefit from a collegial collaboration (Darling-Hammond et al., 2017) and that the implementation of such a designated work needs the local school management's active support (Jarl et al., 2017). We have followed the commencement and implementation of twelve subject-based planning teams (audio recorded meetings; documents). A modified version of the Tyler-model (Tyler, 1950), and tools from legitimation code theory (Maton, 2014) frames the analysis. The contribution to the fields of subject didactics bridge the knowledge gap about PaP qualities and competencies. It is likewise important for school improvement, as there is a parallel gap about leading PaP as a strategy for improvement. This knowledge is vital for improving school-reform programs, and teacher education.

References

Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). *Effective teacher professional development*. LPU.

Jarl, M., Blossing, U., & Andersson, K. (2017). *Att organisera för skolframgång: Strategier för en likvärdig skola*. Natur & Kultur.

Maton, K. (2014b). *Knowledge and knowers: Towards a realist sociology of education*. Routledge.

Tyler, R. W. (1950). *Basic principles of curriculum and instruction, syllabus for education*. University of Chicago Press.



22. TEPE 2023 Abstract submission

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Abstract title: Trajectories of powerful knowledge and epistemic quality: analysing the transformations from disciplines across different school subjects

Theme: Knowledge transformation in subject-specific research and comparative studies in education

Keywords: *powerful knowledge; epistemic quality, transformation, powerful professional knowledge; subjectspecific educational content knowledge (SSECK)*

Abstract

This paper briefly outlines the development of a comparative research framework in subject didactics and applies this in the process of analysing the transformations from academic disciplines across different school subjects. The theoretical framework builds on that outlined in an earlier discussion involving an exploration of the concepts of ‘powerful knowledge’ and ‘transformation’ by relating these to the concept of ‘epistemic quality’. Within this framework the transformation processes from the classroom to the societal level are considered as ‘trajectories of powerful knowledge and epistemic quality’. The framework is used to analyse the findings from recent empirical studies across school subjects that have been reported on in publications arising from the Knowledge and Quality across School Subjects and Teacher Education (KOSS) network. The paper then focuses on analysing the transformations from disciplines across different school subjects, given that the first boundary in defining powerful knowledge concerns knowledge that is *specialized* in both how it is produced and transmitted. To analyse the boundary across school subjects the findings from the empirical studies are grouped into broad subject categories. These are then compared with the corresponding disciplines by using the widely cited Biglan classification scheme of academic disciplines in higher education. Finally, we consider the implications for curriculum planning and teacher education policy and practice. We do so by reflecting on the comparison between subjects and disciplines and also on the nature of teachers’ ‘powerful professional knowledge’ and what is seen as the significance of ‘subject-specific educational content knowledge’ (SSECK).



23. TEPE 2023 Abstract submission

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Abstract title: Transformation of knowledge when assessment is operationalized: What teachers' note-taking practices reveal about L2 oral proficiency assessment.

Theme: Knowledge transformation in subject-specific research and comparative studies in education

Keywords: *L2 oral proficiency, assessment, standardized testing, policy transformation*

Abstract

Oral proficiency is the language ability most difficult to assess in a reliable way (Alderson & Bachman, 2004), partly because raters need to consider numerous aspects simultaneously. Moreover, the social situation in which a test is set affects assessment, making standardized testing of oral proficiency particularly challenging. Few studies have examined how raters orient to these difficulties when operationalizing assessment. In Sweden, students' oral proficiency in English as a second language (L2) is tested annually in the National English Speaking Test (NEST). It is administered by the Swedish National Agency for Education but assessed by students' own teachers. Although teachers are provided with extensive assessment guidelines, they commonly construct their own note-taking document to use when assessing the NEST. The aim of the study is to unveil teachers' assessment processes by examining note-taking practices during assessment of L2 oral proficiency. Research questions address how teachers take notes in the assessment situation, in what way they draw upon their notes when deciding the grade, and reasons behind the creation and use of a note-taking document. Data consists of interviews ($N=13$) with teachers of English that all act as raters of the NEST (grade 6 and/or 9). Interviews were recorded and transcribed. Method of analysis was qualitative thematic analysis, guided by the *Anthropological Theory of Didactics* (Chevallard, 2007). Results show that note-taking documents were regarded as a mnemonic device that helped teachers attend to relevant criteria during assessment, they facilitated collegial discussions and grade decisions, and were helpful for lowering students' test anxiety. In addition, they enabled formative feedback to students, indicating that *accountability* might be part of the discourse behind their use in a summative test. The study contributes to a discussion on knowledge transformation when assessment is operationalized, and how it potentially affects teaching and classroom-assessment of L2 oral proficiency.



24. TEPE 2023 Abstract submission

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Abstract title: Multilingual students negotiating meaning in science through identity texts; a social semiotic view

Theme: Knowledge transformation in subject-specific research and comparative studies in education

Keywords: *Multilingual, social-semiotics, science education*

Abstract

The study examines how multilingual students (11-12 years) negotiate meaning through writing, drawing, and dialogues in science. Students utilize emotions, reflections, and experiences from other areas than the school when they are provided with the opportunity to solve an open-ended task related to key concepts in science. Data consists of texts from three multilingual students and excerpts from co-generative dialogues, collected over a period of five months. The focus students created identity texts connected to an inquiry-based science program, followed by a dialogue with a fellow student and a researcher. The data collection was part of a larger research project in which the students and the class teacher were involved.

Expressions of meaning in the students' drawing, writing, and oral explanations were analysed by using a social semiotic framework. The findings illustrate that emotions and everyday experiences play a major role in the pupils' work on transforming science knowledge. Furthermore, the findings indicate that students engage through different approaches to the science topic, and experiences from outside school have the potential to create curiosity and negotiation of identity, language, and subject knowledge.

The findings are discussed through a lens of social semiotic theory as well as literature involving identity, agency, and investment. The study reflects upon how these aspects are intertwined with the subject-specific knowledge when students negotiate meaning. One implication highlighted is the need for consciousness related to student's different use of semiotic resources when solving a given task. Encouraging multilingual students to use their own resources and providing the opportunity to negotiate meaning about challenging concepts and abstract processes includes a potential for these students to transform their science knowledge.



25. TEPE 2023 Abstract submission

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Abstract title: Mentoring conversations as knowledge-building practices

Theme: Knowledge transformation in subject-specific research and comparative studies in education

Keywords: *Mentoring conversations, teacher education practicum, PCK for teaching L1 writing, knowledgebuilding, Legitimation Code Theory*

Abstract

A crucial task for teachers of Swedish as a first language (L1) is to plan, carry out and evaluate writing instruction that enables pupils to develop complex writing skills necessary for higher education and working life. This requires *pedagogical content knowledge* (PCK; Shulman, 1986) that integrates subject matter knowledge and pedagogical skills. In other words, teachers need to transform their disciplinary knowledge into a subject that can be taught to pupils. However, research indicates that Swedish teacher education syllabi lack learning objectives to develop PCK for teaching L1 writing in campusbased courses (Winzell, 2018). Therefore, field experiences and mentoring in practicum appear to play an important role for preservice teachers' evolving PCK. While mentoring in teacher education practicum have been extensively researched, knowledge is still lacking regarding the types of knowledge generated in mentoring conversations. The aim of this study is to contribute to a better understanding of the potential to build PCK for teaching L1 writing through mentoring conversations in teacher education practicum. Drawing on the Semantics dimension from Legitimation Code Theory (Maton, 2014), this study investigates what types of knowledge are manifested in mentoring conversations, and how shifts between different types of knowledge can be understood from a knowledge-building perspective. The data consist of mentoring conversations (n=16) between 8 preservice teachers of Swedish and their school-based mentors. Preliminary findings suggest that conversations that shift between and integrate conceptual and contextual knowledge have potential for knowledge-building, but that such knowledge transformations are rare in the empirical material. The study concludes that Legitimation Code Theory provides a useful framework to conceptualise cumulative knowledge-building in mentoring conversations. Further, it demonstrates the need for elaborated cooperation between university-based teacher educators and school-based mentor teachers to facilitate knowledge transformation between campus-based courses and practice-based courses in initial teacher education.



26. TEPE 2023 Abstract submission

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Abstract title: Addressing the Shortage of Mathematics Teachers in Estonia: Flexible Qualification Paths

Theme: Teacher education research for change: practice-based research for transformation

Keywords: *mathematics; teacher shortage; teacher education; policy intervention*

Abstract

On one hand, the school mathematics in Estonia enjoys the best time in the history as the OECD PISA has repeatedly (2015, 2018, 2021) shown our 8th graders' superior math results in comparative global research. On the other hand, the hard data on math teachers' increasing age and decreasing share of math teachers with required qualification predicts collapse of our success story in not so far future. Our study reports on recent policy measures addressing changes in both initial and inservice teacher education in mathematics and the first signs of improvement. In Tallinn University, the intake of new master students to mathematics teacher education is increasing, while systemic measures have been introduced also in combined (multi-subject) teaching degrees and in-service retraining programs for qualified teachers in other subject areas. However, we need to look at these processes from a wider perspective of restructuring the Estonian school system (e.g. reform of uppersecondary schools, ongoing curriculum reform, rapid switch to Estonian as a language of instruction in all schools). We conducted focus group interview using Nominal Group Technique, with a purposive sample of 12 school leaders (employers), experienced mathematics teachers, teacher educators and policy makers to design the potential solutions for increasing flexibility of paths that lead to qualification as a mathematics teacher for persons of various age, professional background and experience. This paper discusses the results of our study and weighs the feasibility of proposed ideas in the wider perspective of changing educational policy landscape in Estonia and Europe.



27. TEPE 2023 Abstract submission

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Abstract title: Developing powerful disciplinary knowledge in mentor-mentee conversations

Theme: Teacher education research for change: practice-based research for transformation

Keywords: *Mentor teacher, mentor-mentee conversations, comparative didactics*

Abstract

This paper presents work from a cooperation between researchers at University of Helsinki, UCL London School of Education, and Karlstad University. In the group researchers from four subjects: Geography, Language, Mathematics, and Religious Education work together. The starting point is the overarching research question *How can the nature of teachers' powerful professional knowledge be characterized and what are the implications for teacher education policy and practice?*

We have identified the key role of mentors in teacher development across our school systems, as well as the different contexts for teacher education, and how it frames the role of the mentor. Our interest has been directed towards the role of the mentor teacher when tutoring student teachers in school during their internship. We ask:

- What knowledge for teaching a specific subject do (experienced) mentors foreground when supporting novice subjectteachers?
- How is that knowledge negotiated between mentor-mentee?
- Whose knowledge?

We have conducted qualitative interviews based on a purposeful sample of experienced mentor teachers in each subject and country. The different national and subject lenses are helpful when examining mentors' experiences of mentoring, as well as studying knowledge, skills and values "in play" that may be related to both subject knowledge and generic competencies.

The results show key aspects in mentoring subject specific teaching during teacher students' internship across school systems and subjects, as well as differences depending on in-school experiences, number of lessons taught, type of guidance, etc., and if theory and practice are intertwined or not in the teacher training program.



28. TEPE 2023 Abstract submission

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Abstract title: Reflective practice in pre-service teacher education. A case study

Theme: Teacher education research for change: practice-based research for transformation

Keywords: *reflective practice, portfolio, educational experience, teacher education*

Abstract

Preparing future teachers for their role in an ever-changing school environment is not an easy task. Usually, Polish academic programs focus on the didactics and pedagogy, leaving little time for the personal development of individual teachers. In the School of Education of the Polish-American Freedom Foundation and the University of Warsaw a new approach towards teacher training was created, stressing the role of self-reflection and practice. As a part of this program students participate in the Integrative Seminars which are a unique design, absent from teacher-training programs utilised at other academic centres in Poland. The original idea was inspired by the Teachers' Residency Program at Teachers' College, Columbia NY, but underwent many modifications to better fit Polish educational environment.

An Integrative Seminar is a 3-hour long meeting, held every Friday, during which students apply various methods to reflect on their experiences from schools as well as develop their professional skills and techniques. They learn how to be a part of a teachers' learning community and use methods of co-teaching in their everyday practice. Every student prepares their eportfolio tracking and showing their professional development.

During the speech the author will present a theoretical basis of Donald Schön's *reflective practice* and its implementation in the teacher-training program. Also, the main parts of the syllabus as well as examples of practices will be outlined. The presentation will conclude with findings from a 7-year-long evaluation process, discussion of further modifications as well as chances and challenges of scaling the project.



29. TEPE 2023 Abstract submission

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Abstract title: Newly arrived women on vocational programs

Theme: Teacher education research for change: practice-based research for transformation

Keywords: *Female newly arrived students, Students' educational choices, Vocational upper secondary school, Narrative research*

Abstract

The Ministry of Education shows that interest in vocational education among young people in Sweden is decreasing (SOU 2020:33), apart from one exception. A survey from the Swedish National Agency for Education (2017) shows that vocational education is attractive to newly arrived-immigrants. In that context, this study will be about three newly arrived female students' stories about their choice of vocational education, which is an upper secondary education in Sweden. The study is based on a narrative approach (Goodson & Anstead, 2012; Mishler, 1999) and is combined with Bourdieu's (1986) theory of capital to discuss these women's vocational education choices.

Bourdieu (1986) writes that there is a relationship between the capital that a person carries with them, and the experiences that have been incorporated into the person. The decisions people make in different life periods are related to their capital and the experiences they have acquired. In my study, it appears that the decisions that the women make regarding the choice of vocational education are related to their previous life experiences and adapted to conditions set by the Swedish state regarding the right to live in Sweden. In addition to Bourdieu, the results are discussed in relation to women's vocational skills and vocational learning in Sweden in a historical light (Broberg et al., 2022). Newly arrived female students reconstruct the existing history of women's professional skills with skills that traditionally have not existed in Sweden, for example carpet tying.

The results highlight three characteristic aspects that are related to their choice of vocational education: 1) not being a stay at home person, 2) learning the language and 3) learning a profession. The study is important for the future Swedish vocational teacher education that trains vocational teachers who will meet and teach this category of students in Swedish schools.



30. TEPE 2023 Abstract submission

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Abstract title: Intercultural Awareness in Teacher Education Policy and Student Professional Practice

Theme: Teacher education research for change: practice-based research for transformation

Keywords: *intercultural awareness, policy, teacher education, teaching practice*

Abstract

This presentation shares a current project about teaching practicum as context for understanding intercultural awareness. Schools and preschools in Sweden are culturally diverse arenas, with more than a quarter of children in Sweden having immigrant backgrounds. Thus, graduate teachers need to be able to work children and families from ethnically and linguistically diverse backgrounds. Both local and international practicum can help us understand the phenomenon of intercultural awareness, although few student teachers travel abroad. We use transformative learning theory (TLT) as a way to analyse student experience and reflection during practicum. TLT focuses on adult learning and how previously acquired knowledge or frames of reference may change through increasing awareness of assumptions.

In the presentation we share (1) a review and analysis of curriculum, university and policy documents that are of relevance to intercultural awareness in Swedish teacher education and (2) our project design and (3) how the project has been informed by our previous research and from a study of intercultural awareness amongst student nurses. From our previous research (2022) we have found that interculturality is seen as most relevant to early childhood student teachers when it is explicitly connected to their local practice, rather than as theoretical or from international contexts.

Our project purpose is to quantitatively measure intercultural awareness, and qualitatively gather examples of student reflection and perception. From these data and policy analysis, our recommendations highlight opportunities for transformation of higher education teaching, of practicum teaching experience, and of connection between local and global perspectives.

Limitations include potential growth in intercultural awareness cannot be attributed to practicum as separate from the overall course. The interviews and reflections which explore this further are from a small, targeted sample. The study is in-progress.



31. TEPE 2023 Abstract submission

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Abstract title: Multiple paths to strengthening the knowledge base of teacher education. A study of PhD dissertations defended at Norwegian teacher education institutions 2020 to 2022

Theme: Teacher education research for change: practice-based research for transformation

Keywords: *teacher education research, PhD, diversity, teacher education subjects, pluridisciplinarity*

Abstract

Norwegian teacher education has been a hot political issue for the last thirty years. The Government has initiated five reforms and seven evaluations. Strengthening the research base of the education and teachers' professional practices have been two central concerns, developing programs on master's level another. The reforms have also emphasized measures to reduce the "gap between campus and the world" (KD, 2018, p. 11), and have aimed for a stronger focus on diversity. As such, they reflect major trends in teacher education around the world: the research turn and the practice turn, as well as the focus on teachers' need to adapt their teaching to a diverse student group (NOKUT, 2020). According to the Ministry, a PhD should be the main path to permanent position in teacher education (KD, 2018, p. 17). Supporting the way forward, a national research school (Smith, 2022), and extra PhD scholarships have been funded.

In this paper, we present a study of dissertations defended at teacher education institutions in the years 2020 to 2022. We analyze them in light of their contribution to the knowledge base of teacher education, inventory the teacher education subjects and programs they represent, and ask which challenges in the educational system they address. Educational research often build on several disciplines, we therefore also ask in which ways these dissertations represent pluridisciplinarity.

All in all, we have registered 189 dissertations. Our study uses the published abstracts as main data, supplemented with the full text when necessary. The analyses show that the dissertations represent most teacher education subjects and programs and demonstrate a wide range of theoretical frameworks and methodological approaches. We will illustrate the findings through a close look at dissertations dealing with two particular topics: teacher education and diversity



32. TEPE 2023 Abstract submission

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Abstract title: Didactic modelling as a way to overcome the tension between vocational and academic orientation in student thesis

Theme: Teacher education research for change: practice-based research for transformation

Keywords: *student thesis didactical modelling science education*

Abstract

Many preservice teachers wish to do vocational oriented degree project that can help them develop relevant and useful didactical knowledge for their future professional practice. At the same time, there is a requirement that the students' degree projects must live up to academic standards in terms of scientific quality. Student thesis that have a strong vocational orientation have shown to have difficulty living up to scientific standards, while students who do thesis with a strong academic orientation have had difficulty seeing the usefulness of the knowledge they develop for professional practice (Råde, 2014). The purpose of this presentation is to present ideas about how didactic modeling as a research approach in students thesis can be a way for students to develop useful knowledge for professional practice and to strive for high academic standard at the same time.

Wickman et al. (2018) argue for considering didactics as the academic discipline of teachers' profession. The concept of didactic models plays a central role in their reasoning. Didactic models help teachers make decisions when planning, implementing and evaluating a specific content by supporting didactic analysis and design. This is referred to as didactic modeling. In didactic modelling, the *exemplification* phase is central. It concerns the documentation of teaching examples where a didactic model has been used for didactic analysis and design of teaching. In a student thesis, students can address a teaching problem they themselves have experienced and document how a didactic model can function as support for analysis and design in the process. This will be a way for the students to both increase their own didactical competence and contribute to the didactical knowledge based. Hence, the academic orientation simultaneously becomes a vocational orientation, and the tensions dissolves. Authentic examples from science education will be presented.



33. TEPE 2023 Abstract submission

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Abstract title: Introducing linguistic diversity and migration as a theme in Swedish elementary school

Theme: Teacher education research for change: practice-based research for transformation

Keywords: *Keywords: linguistic diversity, migration, elementary school, powerful knowledge*

Abstract

This presentation explores which didactic choices four Swedish teachers make, as they introduce three lesson plans about linguistic diversity and migration in upper elementary school. In addition, teachers' reflections on these choices and what new knowledge students develop, are examined. Research about teacher beliefs (Fives & Buehl, 2012) has shown that teachers' values, opinions, knowledge and experiences are assumed to be relevant to a practice, and are also assumed to influence the same. To analyze the choices teachers make, we use theory that sees teachers' professional practice as powerful (Young, 2009/2016).

The empirical material consists of classroom observations and teacher interviews. The results show that the theme of linguistic diversity and migration engages both teachers and students. The teachers describe the theme as important, but confirm that they have not seen it addressed in teaching materials. Neither in the previous curriculum (Lgr11) nor in the current one (Lgr22) are issues of linguistic diversity included within the Swedish subject. Given the increasing number of students from diverse linguistic backgrounds in schools, we argue that knowledge about linguistic diversity is something that benefits all students. Promoting students' interest in different languages and cultures at an early age and encouraging positive attitudes is an important task for teachers. If Swedish teachers' powerful knowledge is to be developed, the perspective of Swedish teachers needs to be expanded and they need knowledge of multilingualism and diversity.

References

Fives, H. & Buehl, M. M. (2012). Spring cleaning for the "messy" construct of teachers' beliefs: What are they? Which have been examined? What can they tell us?.

Young, M. (2009/2016). What are schools for? I M. Young & J. Muller. *Curriculum and the Specialization of Knowledge. Studies in the sociology of education* (s. 105-114). Routledge.



34. TEPE 2023 Abstract submission

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Abstract title: Supervisors' perceptions of teacher candidates' preparedness for their future jobs as teachers

Theme: Teacher education research for change: practice-based research for transformation

Keywords: *teacher education quality, school placement, supervisors' opinions*

Abstract

In Sweden, the supposed low quality of the Swedish teacher education has been identified as an important reason behind weak student achievement. This is reported in a number of international student assessments. Low quality of teacher education has been the focus of several government inquiries. When these claims are made, they are seldom supported by any references to empirical research. Moreover, there is a paucity of research that measures the quality of teacher education.

The purpose of this study is to examine supervisors' perceptions of teacher candidates' preparedness to work as teachers.

A questionnaire was developed and a total 1154 supervisors working at school placements were targeted.

The questionnaire to the supervisors was developed containing closed and open questions. The questionnaire was sent digitally to 1154 supervisors. Answers were received from 420 supervisors (36 % response rate).

Some of the questions have been analyzed and more focus have been given to the open responses.

The questionnaire shows that supervisors consider the teacher candidates in general were well prepared for their future work, but they are not sufficiently prepared to handle communication in the classroom, cooperation with other teachers and the mission of schools. It was reported that the teacher candidates could be better at being in time, being prepared for lessons, interact with pupils and cooperate with other teachers.

The study shows how the supervisors think about the teacher candidates' preparedness to teach and indirectly the quality of the teacher education. The study does not provide a statistically representative picture of the supervisors' opinions about the teacher students preparedness to work as teachers. Instead, it represents a pilot study and it shows a possible approach to get some ideas about how well-prepared teacher students are for their future work and the quality of teacher education.



35. TEPE 2023 Abstract submission

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Abstract title: Working with the Linguistic Landscape: Transforming English Language Teaching

Theme: Teacher education research for change: practice-based research for transformation

Keywords: *teacher education, novice teachers, linguistic landscape, teacher language awareness*

Abstract

The role of English has undergone drastic changes in the last few decades. It has risen to the status of a global language and students are thus increasingly exposed to English outside the classroom. Whether they encounter English on online platforms or in the urban environment, English has found its way into the linguistic landscape (LL) of Austria. While these new developments show great potential to transform the teaching of English as a foreign language, they also present challenges for English language teachers, specifically novice teachers, which will have to be addressed in teacher education so that the next generation of teachers can adapt the goals of their teaching to the reality of English as a global language.

In this talk, I will present my research on Austrian student and novice teachers' willingness and ability to incorporate the LL in their teaching. I will also report on the findings from the semi-structured interviews I conducted in which student teachers were asked to reflect on specific tasks that make use of the LL for English language teaching which they had designed themselves. While the student and novice teachers shared an overall positive attitude towards the integration of the LL in the ELT classroom, their tasks varied in quality and effectiveness. My findings suggest, therefore, that further training in areas such as teacher language awareness is necessary for teachers to fully realize the transformative potential of the LL in the English language classroom.

In addition to the findings of my research project, I will also discuss how projects such as mine can influence future teacher education programs to better prepare teachers and hence their learners for the challenges of teaching English in a globalized society by bringing the linguistic landscape into the classroom.



36. TEPE 2023 Abstract submission

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Abstract title: Critical Reflections and Self-Efficacy: Transferring Rhetorical Awareness Successfully in First-Year Writing Classroom

Theme: Teacher education research for change: practice-based research for transformation

Keywords: *rhetoric, rhetorical awareness, FYW, self-efficacy techniques, critical reflection*

Abstract

While longitudinal research within the field of First-Year Writing (FYW) and rhetoric has contributed to our understanding of transfer knowledge in FYW Classrooms, there has been less attention given to empirical research on prior knowledge and how we, as teachers, help students to become rhetorically aware. This study reports findings from gathering data from 22 students and examines how students access and make use of prior knowledge on rhetorical awareness when they complete the pre-assessment and post-assessment. Findings reveal that students have a natural understanding of rhetorical elements, however, not explicit, which is needed in FYW and beyond. To upgrade students' rhetorical awareness I used self-efficacy techniques and critical reflection as an intervention to achieve better results. This is not to say that every students' rhetorical awareness developed once they practiced critical reflection or held generative beliefs about their writing; however, the results from the pre-assessment were significantly better than the pre-assessment. Based on these findings, I suggest that both selfefficacy techniques and critical reflection as interventions are shown to be used in FYW classrooms.



37. TEPE 2023 Abstract submission

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Abstract title: Addressing double discontinuity for future mathematics teachers by using Digital Interactive Mathematical Maps

Theme: Teacher education research for change: practice-based research for transformation

Keywords: university mathematics education, digital resources, technology, defragmentation, digital interactive mathematical maps, teacher education

Abstract

Klein (1908/1932) pointed out that future teachers have difficulties in linking school and university content in a meaningful way. He described this as a double phenomenon called "double discontinuity", expressing problems of prospective teachers when transitioning from school to university and again when transitioning back to school. These problems still cause considerable dropouts as well as a lot of frustration among teachers, students and pupils (e.g. Pinto & Cooper, 2022; Winsløw & Grønbæk, 2013).

As a way to address this phenomenon, the teaching and learning tool Digital Interactive Mathematical Mapsⁱ (DIMM) was developed at the University of Passau, in the project SKILL funded by the Federal Ministry of Education and Research of Germany.

We use the educational context of two different courses (Geometry/Calculus) within the teacher education of upper secondary teachers at Karlstad University, to explore the technical implementation and usefulness of the components of the mathematical map as tool to overcome the problem of Klein's double discontinuity. We explore how to improve the maps such that a user will find it easier to explore. The data are students' responses to the weekly assignmentsⁱⁱ and quizzesⁱⁱⁱ and their reflections on the use of the map. In total, 36 pre-service and 27 in-service teachers participated in the study.

References

Klein, F. (1908/1932). *Elementarmathematik vom höheren Standpunkte aus. Teil I: Arithmetik, Algebra, Analysis. Vorlesung gehalten im Wintersemester 1907-08*. Teubner.

Pinto, A., & Cooper, J. (2022). The road not taken - Investigating affordances of infinitesimal calculus for enriching the repertoire of secondary mathematics teachers. *International Journal of Research in Undergraduate Mathematics Education*, 8(2), 318–338.

Winsløw, C., & Grønbæk, N. (2013). Klein's double discontinuity revisited: contemporary challenges for universities preparing teachers to teach calculus. *Recherches en Didactique des Mathématiques*, 34(1), 59–86.

[i] The DIMMs are freely accessible at <https://math-map.fim.uni-passau.de/>

[ii] https://docs.google.com/document/d/e/2PACX-1vTq_w6A2MqresPr5PQLGujDt3NIS6i7aiL7ShsmaR841TtIhrsytM2zLY6UEhbULBumIx0zEtTOz6V/pub

[iii] https://docs.google.com/document/d/e/2PACX-1vRBvFRPKkbRvPYFeD3ZQ9yh744SRdqyt4vx6f1h0vXx_n7eEqtdVhFcMYTepSxPw/pub

38. TEPE 2023 Abstract submission

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Abstract title: Collaborative science teaching in diverse classrooms

Theme: Teacher education research for change: practice-based research for transformation

Keywords: *collaborative science teaching, diverse classrooms, integrated language and science*

Abstract

This study investigates how knowledge about integrated language and science teaching can be developed through collaboration between a school teacher and a researcher. Scaffolding participation and student agency are important aspects of the study as the transformation of subject-specific knowledge and language through science activities are in focus. The teacher and the researcher collaborated on implementation and exploring a dictogloss activity in a science context in a diverse classroom (11-12 years old). The data collection took place over a period of approximately six weeks, as part of an inquirybased teaching program included in a long-term research project.

The data material consists of a transcribed interview with the class teacher and the author of the article (researcher). The conversation was conducted after the dictogloss activity had been explored in the classroom three times. Observations, variations in the activity, and reflections about the students' engagement and interactions are among the topics being discussed between the teacher and the researcher. The framework for analysing excerpts is based on literature involving integrated language and subject-specific learning, and student agency.

The findings reveal differences in the teacher's and the researcher's interpretations and opinions about the activity. However, the reflections on participation for the multilingual students in the class indicate a raised consciousness about scaffolding in different parts of inquiry-based teaching. This implies that collaborative practices can constitute an important step to increasing knowledge and consciousness about research-based teaching in diverse classes, for both researchers and teachers. Also, the findings indicate that established practices among teachers and researchers may be difficult to change, implicating the need for long-term collaborations.



39. TEPE 2023 Abstract submission

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Abstract title: Design of an international action-research projet: affectivity in teacher education

Theme: Teacher education research for change: practice-based research for transformation

Keywords: *Design; international; action-research projet; affectivity; teacher education*

Abstract

Affectivity in learning is relevant as an educational paradigm for dealing effectively with today's societal challenges (Bromseth & Sörensdotter 2014). As a social rather than psychological construct, affectivity refers to the collective forces and interactions that can make teaching truly relational and connecting (Gibson-Graham, 2006). However, evidence shows that the potency of affectivity in teaching cannot solely be restricted to pedagogical techniques. Still, its efficacy lies in attending to the emotional dimensions of teaching and learning (Zembylas, 2019).

We discuss a project oriented to inquire into the pedagogical challenges that emerge during teachers' efforts to adopt an action research approach for designing and implementing an affect-based curriculum for promoting students' learning and engagement. The goal of the action research inside the Teacher Academy project (funded in 2022 by Erasmus +) will be to bring teachers together to design a model/prototype intervention/program for promoting students' affectivity oriented to go beyond the national boundaries. RQ: What is affect/emotion in the classroom? RQ: How can teachers create affectivity conditions to channel students' learning and engagement? RH: Students' situational interest/personal interest will change as part of their participation in the intervention program

Ethics approval is asked. State secondary schools are situated in France and Greece. Approximately ten qualified teachers will participate in the study. The data will be collected from a longitudinal perspective. The four conditions developed by Capobianco and Feldman (2010) will be included.

The research methodology consists of a pre and post-test to collect quantitative data about the intervention. Qualitative data will be collected focusing on affectivity as part of the teachers' action research process. The proposed project adopts a mixed methods data collection, combining qualitative and quantitative research and data (Creswell, 2014). The design of the project and the first data will be discussed at the conference.



40. TEPE 2023 Abstract submission

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Abstract title: Practice how to teach - in a simulation versus in reality

Theme: Teacher education research for change: practice-based research for transformation

Keywords: *Teacher students, simulation, teaching, semi-virtual reality, practice teaching, teacher education*

Abstract

Pre-service teachers (PST) need plenty of opportunities to practice teaching skills during their teacher education. We will share experiences from how we have used simulation training in teacher education programs, for PSTs becoming middle school teachers, high school teachers or secondary school teachers. They have practiced teaching regarding mathematic didactics, leadership, conflict management, sexual education, or social sciences. The simulation training was carried out in a semi-virtual simulation (SVR) called TeachLivE where the PSTs taught five virtual students with various personalities and knowledge abilities. The virtual students were controlled by a simulation specialist, who operated what they said and did.

The purpose of this paper is to contribute knowledge about how simulation training is both similar and different from teaching in a real classroom, and how that can affect PSTs learning opportunities.

Data consists of recorded sessions, field notes and interviews with PSTs and instructors that taught them. Preliminary results show that there are enough similarities between the simulation and the real classroom, for PSTs to experience it as realistic. They particularly emphasize that the reactions of the virtual students are authentic and represent actions, conceptions and conversations that could appear in reality. There are also some differences between teaching IRL and in SVR. Firstly, it is not possible to move to or to touch the virtual students. This is a limitation, but the PSTs seem to adjust to that. Secondly, the virtual classroom only has five students. The analysis shows that these students represent the variety in a normal classroom, and that they help PSTs to perceive this variation, which is not always the case in a real classroom. Thirdly, it is possible to pause the simulation. Analysis from recordings show that this function can help PSTs to interpret, understand and make decisions in complex situations.



41. ~~TEPE 2023 Abstract submission~~

Taik Kim[†]

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Abstract title: ~~The effects of lab-based instruction on elementary pre-service teachers' mathematical knowledge~~

Theme: ~~Teacher education research for change: practice-based research for transformation~~

Keywords: ~~Pre-service teacher, math education, Teaching & learning, Elementary education~~

~~Abstract~~

~~The research aimed to improve pre-service teachers' mathematics knowledge and scores on the state teacher license exam on mathematics. Mathematics anxiety has important consequences for teacher practices that influence student achievement. Prospective elementary teachers have the highest levels of mathematics anxiety compared to other college majors. The researcher utilized strategies such as lab-based instruction and focusing on a teaching area to reduce pre-service teachers' anxiety, while improving their pedagogical content knowledge.~~

~~There were 118 participants from 2015 to 2022 who took Mathematics for Elementary Teachers I and II. Prospective teachers' anxiety was greatly reduced as indicated by higher passing rates on the state teacher license exam. Pre-service teachers had a chance to collaborate and present solutions to problems during lab hours. Before taking pedagogy courses from the College of Education, many students struggled with low confidence. Because the content courses focus on college-level math, pre-service teachers do not have the chance to improve their skills on topics they will eventually teach. For example, many pre-service teachers struggle with fractions, typically covered in grades 4-6. In conclusion, new initiatives succeeded in increasing prospective teachers' mathematical knowledge and improving confidence in specific teaching areas.~~

~~Simultaneously, the state license exam passing rate improved from 26 to 78 percent.~~

~~The researcher used a survey designed to collect data related to teaching strategies and other components, such as the state license test. The evaluation used a mixed-methods approach based on quantitative/qualitative data drawn from multiple data sources (document review, surveys, interviews, direct observation, and achievement tests). The implication was that lab-based instruction could be a vital teaching strategy for producing well-qualified teachers, and prospective teachers need to take courses directly related to elementary math, not college-level math courses. Restrictions of the research were a limited setting with a small sample size.~~



42. TEPE 2023 Abstract submission

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Abstract title: The importance of educational teacher knowledge. A knowledge from the educational practice (This paper is inside of the competitive research #Lobbyingteachers:Ref. PID2019-104566RA-I00)

Theme: Teacher education research for change: practice-based research for transformation

Keywords: *teacher knowledge, pedagogical content knowledge, teacher collaboration*

Abstract

Teacher knowledge is a key element to understand teacher education and profession. Research lines about teacher knowledge have usually focused on Pedagogical Content Knowledge (hereafter PCK) mainly because it is a specific knowledge of teaching which emerges from the educational practice. However, the approach used and models for understanding teacher knowledge don't include the knowledge construction by teachers. Verástegui and Úbeda's model (2022) has been developed to overcome this limitation, which includes teacher agency as a key element for understanding teacher knowledge. The aims of this research are to define the degree of operationalisation of the model and to study the definition of educational teacher knowledge which incorporates teachers' capacity to build educational knowledge. We have used a qualitative phenomenological approach, through discourse analysis method and two instruments, semi-structured interviews (pre and post) and focus groups. We have counted on 25 teachers to understand how they see this phenomenon and what is their experience with it and if their perception varies after participating in a training program focused on teacher collaboration. The main findings show that the model is comprehensible to teachers, it partially approximates their experience, and it incorporates new elements for understanding the nature of the concept. Also, teachers consider knowledge construction as an inherent activity of teaching and they define it in a more complex way when they participate in collaboration dynamics. Consequently, this research makes it possible to overcome some dichotomies in the conceptualization of educational teacher knowledge and incorporate collaborative dynamics into its comprehension and generation. Finally, we conclude that the educational teacher knowledge concept is a good one to understand teacher knowledge phenomenon with a multidimensional view and we propose an improved definition of this concept, some updates to the model and new research lines to validate its capacity for researching the object of study.



43. TEPE 2023 Abstract submission

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Abstract title: Practical/experimental work in natural sciences subjects during distance learning

Theme: Teacher education research for change: practice-based research for transformation **Keywords:**

Keywords: distance learning, practical/experimental work, students, teachers.

Abstract

The purpose of this research was to show how distance learning is organized and implemented in the second year of the pandemic with a focus on the practical/experimental part as one of the teaching challenges at this time that includes the education system. 7 teachers participated in the study, who teach in a primary school in Austria. Semi-structured interviews were used as an instrument of this research. The study has a qualitative approach. The results of this research show the experiences of the teachers mainly in the subjects of natural sciences and it turned out that the teachers implemented the practical/experimental part in two ways. In some cases, depending on the nature of the subject, teachers do the experiment themselves while the students see it from a distance and then they ask the students to do it and send the video, and the other form when the teachers request for the students to do the experiment themselves and present each one to the other students.

The study highlights the challenges that teachers have encountered, in providing the necessary tools and materials, digital tools, etc.



44. TEPE 2023 Abstract submission

Katalin Hubai¹

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Abstract title: Teacher preparation in Hungary in times of change: Exploring possible implications of research on pre-service English teachers' practicum

Theme: The impact of policy on teacher education in times of change

Keywords: *pre-service teacher education, teaching practicum, mentor teachers, EFL, Hungary*

Abstract

Pre-service teacher education in Hungary is currently being restructured (Hungarian Government, 2021), while already challenged by 21st-century expectations for teachers (Cochran-Smith, 2021; Halász & Michel, 2011) and teacher shortage. Time has come to reflect on components of teacher training and those practices involved in it. Cornerstones of successful teacher education lie in consolidating theory and practice (Darling-Hammond, 2006), and the teaching practicum plays a prominent role in this process (Gebhard, 2009; Malderez, 2009). This study is part of a research project investigating English as a foreign language (EFL) teacher trainees' preparation for future classroom work. It focuses on their 15-hour teaching practice supervised by mentor teachers and aims to gain a better understanding of the mentors' views of the teaching practicum through two different sub-studies. For sub-study 1, six semi-structured interviews were conducted with EFL mentors in practice schools of a Hungarian teacher training university on their trainees' preparedness to teach and the priorities of the practicum. A key concern was trainees' awareness of putting into practice the knowledge acquired through university courses, while participants emphasized the importance of working with real-life students, a complex understanding of teachers' career prospects, and learning opportunities through self-reflection. In sub-study 2, the analysis of assessment documents written by four mentors revealed their main themes and what the aims of the practice were according to them. The mentors prioritized relationship-building with the students, an aim-oriented approach to teaching, openness to trying out different alternatives, and professional dedication. Implications of the two studies, to be complemented with a sub-study involving university-based trainers, will benefit the development of guidelines for the revised teaching practicum, and the highlighted good practices will establish a knowledge base available to all participants of pre-service teacher training, potentially also applicable for international teacher educators facing similar issues in times of change.



45. TEPE 2023 Abstract submission

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Abstract title: Nordic basic schools as past, present and future sites for diversity and inclusion in diverse knowledge-based societies

Theme: The impact of policy on teacher education in times of change

Keywords: *One school for all, digitalisation, diversity, Nordic welfare model*

Abstract

In a changing world, Nordic societies face the challenge of maintaining a just and inclusive society while undergoing rapid ideological, economic and social changes. In this development, basic education as well as teacher education play a key role but also faces new challenges related to increasing diversity among students' backgrounds. On-going digitalisation and hybrid sociality made possible by mobile phones and computers have contributed to increased individualisation and to weakening of the classroom as a shared space where students from different backgrounds meet. These are challenges that education systems at large, including teacher education, has to prepare for in relation to a future we know little about. This presentation is part of a Nordic research project that examines how the ideals and practices of "One school for all" as a core of the Nordic welfare state has developed from the 70's until today. Through multidisciplinary studies of four different Nordic schools, we explore their changing role for inclusion and exclusion over a time-span of approximately 50 years, attempting to shed light also on future challenges related inclusive and knowledge based education. The research material consists of policy documents and archive material from the selected schools, interviews with former students about their life histories, small projects carried out collaboratively with students, video material, field notes, and interviews from the schools today. Taking the Swedish school as our case, this presentation mainly draws on some initial data from interviews and observation studies with former and present students attending the same school, but 50 years apart. Based on these preliminary findings, we aim to discuss possible contributions from our project and what could be implications for teaching and teacher education.



46. TEPE 2023 Abstract submission

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Abstract title: A place for religion and worldviews in Swedish preschool teacher education? In search for policyrelated incentives for supporting students' development of a socially sustainable professionalism

Theme: The impact of policy on teacher education in times of change

Keywords: *preschool teacher education, policy, religion, worldviews*

Abstract

Social sustainability – including equity and non-discrimination related to religion and worldviews – is central to all higher education. Regarding preschool teacher education (PTE), the Higher Education Ordinance highlights the ability to promote social sustainability in preschool. Therefore, students need opportunities and support to develop socially sustainable professionalism. We argue that this includes the competence to provide age-appropriate worldview education and an ethic of care in preschool, including openness and sensitivity to children's expressions of existential life issues and worldviews. In Sweden, there are no previous studies investigating the content or discourse of PTEs from the perspectives of religion and worldviews. Research does show challenges related to problematic discourses on diversity and interculturality in teacher programs. Furthermore, previous findings illustrate that for students to become aware of their personal worldviews and values, PTE needs to provide them with the competence to teach accurate knowledge content regarding religion and worldviews and to create safe spaces for students' self-reflection. Our ongoing pilot study of Swedish PTEs is based on program plans and websites of all 20 programs. The analysis focuses on the content and discursive norms, regarding religion and worldviews on a national policy level, and the methods used, are discourse analysis and content analysis. The result shows that only one program plan mentions religion and worldviews explicitly, which means a lack of policy incentive for teachers in the programs to highlight it in their teaching. However, this single example needs to be studied more closely via other materials, as are the PTEs that do not address religion or worldviews in their program plans. The pilot study, along with a theoretical and analytical tool created for this purpose, is going to serve as the starting point for a larger, in-depth national research project where this will be done.



47. TEPE 2023 Abstract submission

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Abstract title: Work integrated teacher education and student suitability

Theme: The impact of policy on teacher education in times of change

Keywords: *work integrated learning, teacher education, suitability assessment*

Abstract

In recent years, the political intentions in Sweden have put forth the parallel aim to increase the number of teachers to schools, together with more student teachers to teacher education – all, whilst wanting to make sure that said teachers and student teachers are the ‘right’ qualified ones. Two reforms that clearly manifest these objectives and give a direction of how to achieve these goals are; firstly, the possibility for suitability assessment during the admission process to teacher education (SFS 2020:881), secondly the goal to increase the number of work-integrated teacher education programs (Government, 2019, 2020).

This study takes its departure in these political intentions and reforms, but in relation to a wider policy analytic perspective by examining one such alternative admission process to one of these work-integrated teacher education programs. In the examined process, representatives from both school unit and teacher education assess the applicant’s suitability for partaking in teacher education, *and* employment as a teacher in one of their units. The empirical material consists of the assessment discussions that take place after the interviews with the applicants to the work-integrated teacher education program.

The results of the study show a consistent picture regarded what is constructed as suitable teacher competence, and necessary competence requirements to start a work-integrated teacher education program. Furthermore, this suitability construction has great consistency with historical discourses about teacher competence. The results also show a clear economic rationality regarding who is assessed as suitable or unsuitable to this kind of work-integrated teacher education, and why some applicants are selected and others not. Finally, the article also problematizes the implications that these practices might have, both from an individual and a societal perspective, and in relation to political intentions.



48. TEPE 2023 Abstract submission

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Abstract title: Reimagining Initial Teacher Education in an Irish Context: How professional accreditation can initiate change and also question what it means to be a teacher educator

Theme: The impact of policy on teacher education in times of change

Keywords: *Programme Accreditation, Reconceptualising teacher education, teacher education policy*

Abstract

The purpose of this paper is to examine the process of ITE programme reaccreditation in an Irish context and how external accreditation initiates and drives change. All teacher education programmes in Ireland have been going through Teaching Council accreditation over the last two years. The accreditation process follows specific guidelines published by the Teaching Council of Ireland in 2020. The current cycle of accreditation is the second since the inception of the regulatory function of the council was enacted in 2006. This paper specifically reflects on the process of accreditation in respect of a full time fouryear undergraduate degree programme designed to prepare students for teaching at primary level in one College of Education. We approached the external accreditation as an opportunity to initiate positive change within the Faculty of Education, and to incorporate more inter and transdisciplinary collaboration between professional studies, and between professional and foundational studies. We will examine opportunities within the accreditation process and broader change within primary education that enables collaboration and the potential for ITE programmes and ultimately ITE students. In this paper we reflect on some of the tensions, outcomes and implications of the accreditation process. We plot the development of the conceptual framework, and how we navigated the process of change within the Faculty. We also discuss the incorporation of student and graduate voice. The accreditation process highlighted a number of tensions that reflect the difficulty of implementing a fully integrated ITE programme and how external accreditation can lead to division rather than collaboration. For instance, the development of the conceptual framework illustrated the positive theoretical debate that occurred, but also the difficulty of implementation at a practical level. Some of these tensions relate to the teacher educator's identification and protection of their field of study and also the tension between theory and practice.



49. TEPE 2023 Abstract submission

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Abstract title: Investing in Learning. On the Societal Value of Teachers and Teacher Education

Theme: The impact of policy on teacher education in times of change

Keywords: *Teachers, teacher education policies, investments, societal value*

Abstract

In this paper, we present policy principles for an Investment Agenda in teaching and teacher education. In addition to mere financial investments, we stress psychological, societal and cultural investments. These go beyond the call for ‘better working conditions’ and ‘more financial leeway’ for teachers. The appreciation for the profession can be strengthened. Attitudes, mindsets and practices can be reconsidered. Cooperation between a range of stakeholders can be fueled, in rather traditional educational fields that are increasingly divided and polarized. We see the *societal value* of education as a collective incentive.

This proposal synthesizes a range of policy texts that were produced to change teacher education in The Netherlands, in such a way that teacher shortages could be solved – which were never solved. We pose the following research question: *Why do policies for strengthening teaching and teacher education fall short, and how can these policies be improved?*

We discussed these questions with various stakeholders, analyzed (national and international) reports and evaluations, and conducted interactive sessions with the educational field. This led us to formulate 7 yardsticks for changing in teaching practices and teacher education policies. Furthermore, we developed practical guidelines for (policy) change, clustered in three main categories: strengthening (1) the teaching profession, (2) teacher education, including induction and professional development, and (3) teacher education policymaking.

In the paper, we extend and illustrate these yardsticks and practical guidelines, and we emphasize the importance of teachers’ societal value. This is not only important to attract and retain teachers, but also for wider societal developments, as teaching contributes to dealing with major societal issues and democratic contexts in which these issues – such as climate change, energy transition, healthy living, fairness – are dealt with. ‘Investing in learning’ connects multiple actors, in educational fields, and their wider environments.



50. TEPE 2023 Abstract submission

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Abstract title: The (in)coherence of European teacher education: A mapping of national policies in times of change

Theme: The impact of policy on teacher education in times of change

Keywords: *coherence, European teacher education, mapping, policy*

Abstract

In the past twenty years, teachers and teacher education have received growing attention in Europe with national governments seeking to reform their teacher education systems in view of improving students' learning outcomes (Symeonidis, 2021). A main aspect of such reform efforts is improving the coherence of teacher education, in terms of interlinking phases, professional domains, actors and contents of teacher education. The aim of this study is to map contemporary policies related to coherence across teacher education systems of different European countries to identify the extent to which systems are converging.

The study was developed in the context of an EU funded project that involves seven universities from five countries (Croatia, Finland, France, Germany, Norway). To map the policies of coherence among the participating institutions, a qualitative survey was developed and data were collected at national and institutional levels. The survey was disseminated among project participants, who gathered relevant information through desk study and analysis of official policy documents. These data were analysed through the descriptive method, which is common in the comparative study of educational systems.

The findings indicate that European teacher education systems tend to become more coherent, particularly with regard to the structure of teacher education programmes and interlinking the different phases. All participating countries have, for example, adopted the Bologna structure of Bachelor and Master studies, with most countries having prolonged the duration of teacher education studies to approximately five years. However, teacher education systems retain a strong national and even regional character, which effectively resists increasing pressures of convergence among European teacher education systems.

References

Symeonidis, V. (2021). *Europeanisation in Teacher Education: A Comparative Case Study of Teacher Education Policies and Practices*. Oxon, New York: Routledge.



51. TEPE 2023 Abstract submission

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Abstract title: Searching for ideal teacher. Foundations and social initiatives defining the teaching profession in Spain.

Theme: The impact of policy on teacher education in times of change

Keywords: *Teacher's identity, Public Administration, private initiatives, public education*

Abstract

Nowadays, the idea of education as a common good which belongs to the democratic's structure is in crisis. There're different factors, but our investigation -which is within the project #LobbyingTeachers- focus on the diversification of actors involved, with the aim of investigating how it's being intervened this idea. Foundations and social initiatives are taking part in the definition of the ideal non-university teacher, its competences and the resources that teachers must know how to use. The circumstance shows two possible ways to think: the possibility of cooperating between the public and private sector; or the possibility of interfering with the values of democracy. In order to investigate how alliances between two sectors are being articulated and how they are influencing the definition of teacher's identity and competences, we have used a qualitative method based on systematic and comparative description of entities. Moreover, we have done ten in-depth semi-structured interviews with different actors that can be categorized into three groups: a) Private and pedagogical historical movements; b) new private social initiatives in education; c) State (Government of Spain) and regional educational administration (Community of Madrid). The main findings show that in the context of turbulence in Spain -with a new education law- around the sense of what it is to be a teacher, old, but especially new actors, are taking on tasks that, a priori, the Public Administration should respond. In addition, educational leadership is no longer fully in the hands of the Public Administration. Consequently, part of the teachers are turning to these new social initiatives to receive training. Therefore, the teacher's identity doesn't respond to a common and public consensus, but to a sum of multiple voices. So, we conclude that, during the next years, the teaching figure will be subject to changes that don't depend exclusively on public recommendations.



52. TEPE 2023 Abstract submission

Christine Schmider¹ and Cindy De Smet¹

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Abstract title: The impact of consecutive curricular reforms in France on future teachers' perceptions of professionalization measures and coherence

Theme: The impact of policy on teacher education in times of change

Keywords: *policy, curriculum reform, coherence, teacher education*

Abstract

This paper examines the effects of the 2020 curriculum reform on future teachers' perceptions and compares them with the results of the 2011 curriculum reform, referred to as the "mastering" of the curriculum. The aim is to investigate how these changes in educational policy have affected the perspectives of pre-service teachers.

The most important reform the French Teacher Education system ever underwent, started in 2011-2012 and has been continuously adapted since. A major objective of the reform was to professionalize the teacher training system and establish national frameworks for teacher competencies in primary and secondary schools.

The 2020 reform focuses on changes to the role of the state exam (concours) and the reduction of practical training to provide more opportunities for gaining subject-related knowledge and didactical skills.

To measure the impact of the reforms, three cohorts of students within the INSPE of Nice following the master education courses were surveyed during the school years 2014-2015, 2016-2017 and 2022-2023. An analysis of the 2014-2015 data by [authors, 2019] found that the French teacher education system closed the professional orientation gap with other European systems due to the reform. A similar analysis of the 2016-2017 cohort by [authors, 2023] confirmed this analysis.

The first and second runs had 92 and 95 participants, respectively. The analysis of the third run is ongoing, but the data gathered thus far indicate that students' perception of a coherent professionalization is more heavily influenced by the successful integration of theoretical competences and knowledge into the practical phase, rather than the actual curricular weight of practical training in the curriculum.

This research will help local and national policymakers in assessing the effects of the 2020 reform and comparing them to previous findings to adapt the teacher education curriculum and its connection to practical training.



53. TEPE 2023 Abstract submission

Katarina Ribaeus¹ and Annica Löfdahl Hultman¹

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Abstract title: Preschool teacher education for public good? - teacher educators' perspectives

Theme: The impact of policy on teacher education in times of change

Keywords: *teacher educators, public good, preschool teacher education, webs of commitments,*

Abstract

The teacher education is often described as being in a performative and standard-based system. Being a teacher educator in this system is a complex task. Teacher educators have to deal with internal demands from students, colleagues and leaders and external demands from state authorities when shaping the education programme in which they teach. This presentation focuses on teacher educators in a Swedish preschool teacher education and aims to explore how commitment to and demands, inside and outside the higher education system, are handled and reflected upon. Results from interviews with teacher educators show among other, efforts to overcome less desirable traditions and how colleagues contribute to tensions but also are perceived as supportive colleagues to learn from. The combined results show how the teacher educators are part of webs of commitments. These webs are regarded as related fields and threads dependent on each other rather than separate parts, making the web/teacher education programme fragile. If any part breaks, the whole programme will be damaged. The discussion relates to how to overcome traditions and making actors in the programme shape a future-directed education together. We argue a need to provide possible tools to make use of deliberation and dialogue, to prepare future preschool teachers as well as the teacher education for public good.



54. TEPE 2023 Abstract submission

Betty Toussia Cohen¹

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Abstract title: A case study of a school in the periphery implementing ICT: from traditional teacher to innovative teacher

Theme: The impact of policy on teacher education in times of change

Keywords: *innovative pedagogy, teacher's role, system-wide reform, organizational change, "island of innovation"*

Abstract

Innovative pedagogy is a method of teaching and learning in which the contents and knowledge studied are relevant to a changing reality (Knezek & Christensen, 2016). This pedagogy makes smart use of technology to promote teaching processes using the model of either “islands of innovation” or of “comprehensive innovation” (Avidov-Ungar, 2010).

During 2010, the Israeli Ministry of Education began implementing a system-wide reform to integrate ICT in schools. As part of this move, 100 schools were chosen to model how to lead this change. These schools became the spearhead for ICT integration as part of their organizational culture.

It should be noted that the school chosen to spearhead the ICT implementation process is in a peripheral area in Israel.

The ICT project empowered the school and its teachers, improving and streamlining the teaching-learning processes in the classroom.

Studies show that the teachers' and other staff member's attitude towards the change is a decisive factor for successful implementation (Avidov-Ungar, 2016; Cuban, 2013).

The south of Israel is typically a peripheral area with a population of medium to low SES. The assumption of the program implementers was that this innovative platform would change the face of teaching, with its massive use of technology to meet the needs of teaching.

The research aim was to examine the attitudes and perceptions of school officials and teachers at this leading school and learn how they describe this “new” role of the teacher in light of the newly implemented pedagogy. The importance of the study lies in listening to the voice of the teachers and officials in order to fully understand how they perceive the role of the teacher in light of the change in a school that is implementing the reform of innovative pedagogy involving the use of technology.



55. TEPE 2023 Abstract submission

Eyvind Elstad¹

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Abstract title: Teacher education in the Nordic region: policy borrowing and universitisation

Theme: The impact of policy on teacher education in times of change

Keywords: *Nordic teacher education, universitisation, policy and practice, comparative study*

Abstract

The purpose of this paper is to scrutinise the impact of policy borrowing and universitisation in the context of Nordic teacher education and to discuss how the education authorities manage aspects of quality challenges that do appear to be important in the contemporary development of policy and practice in teacher education. There is a long history of exchange of ideas between school professionals (1870-1970) which has later been continued in new forums. Sweden was the frontrunner for the other Nordic countries with the introduction of a 9-year compulsory schooling for all (1950) based on pragmatic and progressive ideas. After the turn of the millennium, a new turn in the exchange of ideas has occurred through global influences on teacher education. With the rise and dominance of large-scale international comparative assessments of education performance the focus on Finnish schooling and hence Finnish teacher education was sharpened. The Finnish solution of localizing even teacher education for grades 1-7 at universities has had an impact on the policy that has been pursued in Iceland and Norway, but also to some extent in Sweden. Denmark is an outlier in this context. The Faroe Islands and Greenland have also placed their institutions in universities, but still follow the pattern of 4-year teacher training as in Denmark.

The explanation of the theoretical framework is based on a model of education governance: a complexity of policy spaces emerges as several players influence the outcomes. We also find interactions of global, European and national influences. This interaction might be characterised as a 'vernacular globalisation'. In these policy spaces, public problems are defined and elaborated on, and teacher education policy is meant to deal with them and offer solutions. The paper identifies distinct national features. Implications for policy are discussed and in conclusion some scenarios are considered.



56. TEPE 2023 Symposium presentation abstract

Symposium title: Leadership agency and functions in implementation processes towards whole school approaches to education for sustainable development in primary and secondary schools

Theme: Continuous professional development in times of change

Symposium organiser Teresa Berglund Karlstad University

Abstract:

Higher education institutions in Sweden are obliged by the Higher Education Ordinance to educate students in education for a sustainable development (ESD). Exam objectives for the national teacher education state that judgements based on scientific, social and ethical considerations, especially with focus on children's rights and sustainable development, should be a part of education. ESD is an approach to both contents and teaching methods, and implies that teaching is organized to comprise ecological, social and economic perspectives to prepare and educate students to become aware of, and develop competences for action concerning how to contribute to long-term sustainable development of societies (Boeve-de Pauw et al., 2015).

In this symposium, we seek to understand what attempts of leadership in education that will contribute to lasting changes that become institutionalized in the school organization and grounded in teaching practice. This implies to transform education from a one-sided focus on developing individual behaviors to develop individuals' competences to take part in development towards more sustainable societies (Rieckmann, 2017).

The three papers in this symposium investigate the ESD implementation processes of five schools in a Swedish municipality from different leadership perspectives. The contributions from Mogren et al. and from Forssten Seiser et al. focus on the local pre-conditions in the school organization and school leadership agency in ESD. The contribution from Berglund et al. focuses on middle leading, which is a position in between the school leader and the teaching staff in which leading is enacted by teachers from "among" their colleagues, while at the same time retaining their role as teachers. The development process was directed towards a whole school approach, meaning that ESD is fully integrated in the local curriculum and functions as a pedagogical idea that permeates work in all levels of the school as well as the teaching practice.



Appended abstracts:

56 A. Teresa Berglund, Niklas Gericke, Anette Forsstein Seiser, Anna Mogen & Daniel Olsson
Developing School Leading Guidelines Facilitating a Whole School Approach to Education for Sustainable Development

In this multidisciplinary study we have explored the function of school leading in the implementation process of education for sustainable development (ESD), employing a whole school approach (WSA). School leading and school improvement are both established research fields within leading and development; therefore, it was wise to use the knowledge that is available within these two fields on how to lead and implement improvements in school organizations. A multidisciplinary approach contributes through knowledge regarding the implementation of socially and educationally sustainable qualities. A WSA involves all parts of the school organization contributes to a comprehensive perspective by emphasizing connections between school leading, local school organizations, and ESD implementation. Finally, a practice-informed approach provides valuable insights by investigating principals' leading and its preconditions in terms of the practice architectures enabling or constraining the realization of a WSA to ESD. Practice architectures exist in a dialectical relationship with the practices that they prefigure, in that they both constitute and are constituted by practice.

Undertaking this work required an examination of what happened when ESD was implemented in local school over a period of time. In order to do this, we returned to the five schools in a municipality that had initiated an ESD project in 2016, interviewing principals in 2018 and then again in 2020. The interviews explored whether (or not) the local preconditions had developed into practice architectures that facilitated a WSA to ESD.

Based on the empirical results from this study and school improvement theory, guidelines were developed that can be used to drive a WSA to ESD process forward through three different school improvement phases: initiation, implementation, and institutionalization.

56 B. Anna Mogren, Anette Fortsstein Seiser, Niklas Gericke, Teresa Berglund & Daniel Olsson
Leadership Agency in Education for Sustainable Development

This is an empirical study on leadership actions that promote Education for sustainable development and facilitate teachers abilities to realize ESD in Swedish schools. A review study on school leaders and education for sustainable development, ESD (Mogaji & Newton, 2020) reported the need to make school leaders more aware of ESD as a way to empower students to handle sustainable. The aim of this study is to identify the leadership actions that enable and constrains a permanent implementation of ESD. School leaders at five schools in a Swedish municipality is interviewed twice in 2018 and 2020, to evaluate effects from a longitude school improvement project focusing ESD.

A theoretical framework; coupling mechanisms (Liljenberg & Nordholm 2018), is used to study how school leaders act on three organizational routines of ESD (*a holistic idea of ESD*, the *interdisciplinary approach of ESD* and *leadership legitimization of ESD*) over time. Accommodation mechanisms are searched as they intend to transform and change predefined understanding of education, causing real changes that are permanent. Leadership agency on ESD is demonstrated by thematization of collective acting by the whole group of respondents over time. Leadership agency towards an established ESD implementation is outlined by combining the mechanisms used by school leaders and identified themes of importance for the whole group in leading towards ESD.



Results confirm the importance of leadership actions on ESD to establish a guiding holistic idea in the school organization, as well as acting on communication and feed-back systems where collegial long reaching work can develop over time. Leadership agency demonstrate how the establishment of supporting structures and processes take place and a sketch a possible pathway to accommodate ESD in a school.

56 C. **Teresa Berglund**, Niklas Gericke, Anette Forsstein Seiser, Anna Mogren & Daniel Olsson

Sustainability change agents in whole school approaches to education for sustainable development (ESD): The functions and conditions of ESD-facilitators

This study investigates the experiences of teachers working as ESD-facilitators in a whole school approach project designed to implement education for sustainable development (ESD). The project included ESD-facilitators, teachers, and school leaders. The ESD-facilitators took part in designing joint seminars and workshop activities, and facilitated each school's internal work. This study aims to contribute with knowledge concerning in what ways ESD-facilitators function as change agents in development processes and how their work can be supported.

Different types of sustainability change agents who position themselves differently along the two dimensions of *personal detachment* vs. *personal involvement*, and *instrumental* vs. *open-ended* approaches (to change and learning) have been identified in previous research (Van Poeck et al., 2017). This study investigates the views and practices of ESD-facilitators in relation to these two dimensions, and focuses on what sustainability change agent functions are enacted, and what contextual factors they experience as successful and/or hindering in their work.

Data were collected through semi-structured interviews with seven ESD-facilitators from five schools. Focus areas were their views on: a) the long term goals of the project, b) their role in the internal development work, and c) factors of central importance for their ability to perform their task effectively.

The findings indicate that roles and processes become more open-ended in schools where there is room for collaborative and reflexive work. In schools where the culture encourages shared agency, the ESD-facilitators point to their functions in mediating the process in terms of mobilizer, facilitator, initiator, and/or awareness raiser (*Ibid.*). When there is little room for collaborative work, or the culture impedes it, the ESD-facilitator role and approach become more instrumental and it is harder to integrate ESD and create agency. Those facilitators emphasized their functions in terms of managers, solution providers, experts, exemplars and counsellors (*Ibid.*).



57. TEPE 2023 Symposium presentation abstract

Symposium title: Practice based research in and on teacher education: Collaborative projects between researchers and teacher educators on professional development

Theme: Teacher education research for change: practice-based research for transformation

Symposium organiser Nina Kilbrink Karlstad University

Abstract:

In a webinar on teacher quality 2022, Darling-Hammond stated that teaching is the profession on which all other professions depend, and that teacher quality matters for student learning. Hence, we need a teacher education preparing teachers for the demands of teaching in a changing society. Furthermore, The Swedish Education Act states that teaching at schools should be based on scientific grounds, and in recent years, many collaborative projects between teachers and researchers have been launched. However, there is still a lack on research focusing on teacher education and even fewer collaborative project conducted in and on teacher education, which means that we need to highlight teacher education more in research. Therefore, we have launched three collaborative projects between researchers and teacher educators on professional development in two teacher education programmes (secondary education). Together these three projects aim at developing teacher education and involving teacher educators in research projects relating to their own courses, as well as helping students to develop a powerful professional knowledge and prepare them for their future work in a changing society. In the long run, these projects also aim at developing teacher education on scientific basis. These three projects will be presented in a symposium at the conference and discussed by an international researcher in order to relate the practice-based teacher education research conducted in a local context to an international context.

Appended abstracts:

57 A. Linda Söderlind, Susanne Mellerskog, Nina Kilbrink, Anders Johansson, Lena Jonsson & Hamid Asghari
Transformation of professional knowledge in teacher education: Student teachers' ability to discuss their professional development

During their teacher education, students need to learn to transform professional knowledge into their own teaching practice. As a teacher, the ability to reflect on and discuss your professional development is essential throughout your entire professional life as a way to develop teaching and enhance student learning. This ability is also a main learning objective for student teachers during their practical placement in this study. However, when assessing students' tasks, where students are supposed to discuss their professional development, teacher educators have identified that students have difficulties in concretizing their own experiences and using them in order to identify the next step in their professional development. This difficulty is also confirmed by previous research. There is, however a need to study how teaching can be implemented in order to address those difficulties and the aim of this study is to contribute to such knowledge. Therefore, we have conducted an



intervention study (a learning study) where researchers and teacher educators have collaborated systematically in one cycle to plan, implement and revise teaching by using variation theory as a theoretical framework. At the core we have the object of learning, which in this study is students' ability to discuss their own professional development and, by identifying critical aspects of the object of learning, i.e. what students need to learn and what may be difficult to learn, teaching was planned and implemented. In order to see what was made possible to learn, students' written assignments were analyzed and at the conference we will present preliminary results from this study. This study is part of a larger project and the results can contribute both to a research field where there is a lack of research and to developing teacher education in relation to students' practical placement.

57B. Annelie Andersén, Anette Daleke, Claes Hallquist, Elisabet Olsson, Ann Vestfält & Anneli Wiker

Transformation of reflection in teacher education: Reflection as a tool to make professional development visible

In teacher education, students are required to reflect on their own learning and professional practice. Reflection is seen as a way to show understanding on a deeper level (Herbert, 2015). Therefore, reflection is a concept that appears in several course objectives and thus also in oral and written examinations. But what do we mean by reflection and is there a progression in the way student teachers reflect on their professional development throughout their education, taking into account different approaches to questioning their practice? As teacher educators, we have noticed some differences in how the concept of reflection is used and transformed within teacher education programmes, as well as what requirements are placed on reflective learning in different courses and examinations. In the long term, with the aim of delivering an education where there is a clear progression in the students' reflections throughout the educational programme, the project we have started facilitates a conscious reflective practice that includes concepts of reflection in course objectives and examinations. During the session, we will present the results from having reviewed current reflective practices in teacher education courses at Karlstad University. We will also present a theoretical model we have developed with the help of Brantley-Dias, et.al., 2021. The model functions both as an analytical tool regarding which reflective approach is used in different course activities as well as a tool for continuing professional development, with the aim to ensure progression throughout students' teacher education.

57 C. Minna Arvidsson, Helen Brink, Ann-Britt Enochsson, Liliann Byman Frisén, Kent Fredholm, Zara Hedelin, Anna Nissen & Annica Ådefors

Micro-teaching for academic and vocational student teachers' transformation of content knowledge

Student teachers who previously have gained academic knowledge or vocational skills often find it challenging to transform content knowledge into teaching activities that contribute to their future secondary students' learning. Student teachers express a need for pedagogical tools, time to practice, and opportunities for reflection. Previous research has shown that this can be achieved through *micro-teaching*, which in our interpretation implies that student teachers practice teaching 1) with a limited subject-specific content 2) for a limited amount of time 3) in a low-stakes situation. The aim of this study is to investigate in what ways micro-teaching can support student teachers in designing and conducting subject-specific and pedagogical teaching activities. Our research method is inspired by *action research*, and conducted in four steps. The first step is to carefully plan how to implement micro-teaching for student teachers in our own teaching. The second step is the implementation. In a third step, we evaluate student teachers' experiences from conducting micro-teaching through a survey and individual interviews. The fourth step involves analyzing the results, and adjusting our initial plan for implementation of micro-teaching, if needed. Together, these four steps make up the first cycle. We plan to conduct a second cycle before the research questions can be answered. At the time of writing, we are conducting a first cycle in different subjects. Since the study is still in its infancy, there are no results to report, but we expect to find both similarities and differences between the different subjects in how micro-teaching can support student teachers in transforming existing content knowledge into teaching activities.



58. TEPE 2023 POSTER Abstract submission

Dr Aimie Brennan (MIE), Dr Angela Canny (MIC)

Abstract title: Fostering the value of sociology of education with beginning teachers

Theme: The impact of policy on teacher education in times of change

Keywords: *Sociology of Education, Criticality, Agency, Initial Teacher Education Policy*

Abstract

In Ireland, programme standards for initial teacher education are the benchmark for the process of review and accreditation of programmes. These standards outline the types of knowledge that is needed for both students and teachers to face the challenges of society. In 2020, particular emphasis is placed on the centrality of inclusion, creativity, and agency in teacher preparation. We argue that these concepts are developed through foundation disciplines, particularly sociology of education. Sociology provides a unique and powerful set of tools and theories to objectively explore educational systems and to consider and raise questions about educational practices, policies and developments (Lauder, Brown and Halsey, 2009; Wain, 2018).

This poster presents mixed method data from 138 students, within initial teacher education in Ireland, representing a response rate of 27%. The data explores students' engagement with the Sociology of Education during their programme. Based on a thematic analysis of the data, we find that changes to ITE curriculum and structure have affected student-teacher experiences, understandings of education, and conceptualisations of what it means to be a teacher. We reflect on the value of possibly modelling transdisciplinary integration which may offer opportunities to promote and value sociological learning, particularly, its application to teaching and most especially for students' own longer-term professional development; and reflect on the implications of our findings for the structure and design of initial teacher education.



59. TEPE 2023 POSTER Abstract submission

Anders Eriksson, Niklas Gericke, & Daniel Olsson

Institutionen för miljö- och livsvetenskaper, Karlstads universitet

Abstract title: Developing pedagogic content knowledge during education design research about photosynthesis education in lower secondary school

Theme: The impact of policy on teacher education in times of change

Keywords: *PCK, photosynthesis, EDR, lower secondary school*

Abstract

This study focuses on how secondary biology teachers pedagogical content knowledge (PCK) develops through an educational design research (EDR) of ecology lessons, with special focus on teaching and learning photosynthesis. PCK is a way of describing teachers' professional ability to transform the subject specific knowledge into meaningful teaching content. The aim of this study is to contribute more knowledge on the development of teachers' PCK in fostering students' photosynthesis literacy in an EDR-study.

Photosynthesis literacy has not only the mechanistic focus on photosynthesis processes. In our volatile, uncertain, complex and ambiguous world, it is also important to understand the role of photosynthesis in sustainability issues, such as climate change, biodiversity and food production. Photosynthesis is a complex concept, which teachers and pupils find conceptually challenging. Prevalent misconceptions among pupils about the photosynthesis process are also common. In this study, we therefore investigate an updated photosynthesis teaching (Photosynthesis 2.0).

For the EDR (three rounds) three sets of instructions with 36 lessons were developed. Teachers' instructions developed through the collaboration between two secondary level biology teachers and the researcher in a tentative way. The researcher follows three classes on site and video record the activities. Before and after each round interviews with teachers and student knowledge tests are performed. The EDR takes place January-November 2023. The teachers have limited experience as teachers (two and three years) and express themselves as new teachers, which could be seen as good condition for investigating how PCK develops in teachers' profession.

Well-developed PCK for biology teachers is important at lower secondary level (13 year-old pupils) when teaching about photosynthesis. At the time for the conference, we will be able to present early findings from the EDR in relation to the updated photosynthesis teaching, Photosynthesis 2.0, and its implications for teachers PCK.



60. TEPE 2023 POSTER Abstract submission

Mikael Rydin, Niklas Gericke, Nina Christenson & Jesper Haglund

Institutionen för miljö- och livsvetenskaper, Karlstads universitet

Abstract title: Dealing with tensions in teaching about climate change – an observation study of how tensions manifest and are reconciled in preservice science studies teachers' microteaching about climate change.

Theme: Teacher education research for change: practice-based research for transformation

Continuous professional development in times of change

Keywords: *climate change education, preservice science teachers, microteaching, observation study*

Abstract

Climate change ushers in political, ethical and emotional aspects into the science classroom. This challenges the traditional focus of science education on scientific knowledge and climate change as an issue within science. Literature suggest a pluralistic approach, viewing climate change as an issue of conflicting human interests within society that includes a scientific component. However, research has shown that teacher beliefs largely influence how, and if, climate change is taught. Teacher education has to prepare preservice science teachers to navigate all aspects of teaching about climate change. A recent study revealed tensions in teaching climate change, stemming from preservice science teachers beliefs. The tensions are for example; between being passionate and value-driven or objective and value-free. While these tensions are derived from preservice science teachers intentions in teaching about climate change, there is a need to investigate how such tensions manifest in preservice science teachers actual teaching. In this study, we aim to explore this. Data have been collected from eight preservice science studies teachers' microteaching assignment at the end of a course about climate change and climate change education, including video recordings, lesson plans and a written assignment. The assignment included planning, performing and evaluating a short teaching sequence about climate change. Data analysis consisted of categorizing the preservice teachers teaching sequences according to a framework of selective teaching traditions in environmental education. Subsequently, how tensions manifested and were reconciled was analyzed within those categories. Preliminary findings is that a pluralistic approach enables preservice teachers to deal with tensions concerning values within the political and ethical aspects. The findings have implications for how teacher education programs can engage with preservice teachers in courses concerning climate change as an educational issue. This research is limited to preservice teachers enrolling in science studies as a subject.



61. TEPE 2023 POSTER Abstract submission

Linda Söderlind, Susanne Mellerskog, Nina Kilbrink, Anders Johansson, Lena Jonsson & Hamid Asghari

Karlstad University

Abstract title: Student teachers' ability to discuss their professional development

Theme: Teacher education research for change: practice-based research for transformation

Abstract:

During their teacher education, students need to learn to transform professional knowledge into their own teaching practice. As a teacher, the ability to reflect on and discuss your professional development is essential throughout your entire professional life as a way to develop teaching and enhance student learning. This ability is also a main learning objective for student teachers during their practical placement in this study. However, when assessing students' tasks, where students are supposed to discuss their professional development, teacher educators have identified that students have difficulties in concretizing their own experiences and using them in order to identify the next step in their professional development. This difficulty is also confirmed by previous research. There is, however a need to study how teaching can be implemented in order to address those difficulties and the aim of this study is to contribute to such knowledge. Therefore, we have conducted an intervention study (a learning study) where researchers and teacher educators have collaborated systematically in one cycle to plan, implement and revise teaching by using variation theory as a theoretical framework. At the core we have the object of learning, which in this study is students' ability to discuss their own professional development and, by identifying critical aspects of the object of learning, i.e. what students need to learn and what may be difficult to learn, teaching was planned and implemented. In order to see what was made possible to learn, students' written assignments were analyzed and at the conference we will present preliminary results from this study. This study is part of a larger project and the results can contribute both to a research field where there is a lack of research and to developing teacher education in relation to students' practical placement.



62. TEPE 2023 POSTER Abstract submission

Annelie Andersén, Anette Daleke, Claes Hallquist, Elisabet Olsson, Ann Vestfält & Anneli Wiker Karlstad University

Abstract title: Reflection as a tool to make professional development visible

Theme: Teacher education research for change: practice-based research for transformation

Abstract:

In teacher education, students are required to reflect on their own learning and professional practice. Reflection is seen as a way to show understanding on a deeper level (Herbert, 2015). Therefore, reflection is a concept that appears in several course objectives and thus also in oral and written examinations. But what do we mean by reflection and is there a progression in the way student teachers reflect on their professional development throughout their education, taking into account different approaches to questioning their practice? As teacher educators, we have noticed some differences in how the concept of reflection is used and transformed within teacher education programmes, as well as what requirements are placed on reflective learning in different courses and examinations. In the long term, with the aim of delivering an education where there is a clear progression in the students' reflections throughout the educational programme, the project we have started facilitates a conscious reflective practice that includes concepts of reflection in course objectives and examinations. During the session, we will present the results from having reviewed current reflective practices in teacher education courses at Karlstad University. We will also present a theoretical model we have developed with the help of Brantley-Dias, et.al., 2021. The model functions both as an analytical tool regarding which reflective approach is used in different course activities as well as a tool for continuing professional development, with the aim to ensure progression throughout students' teacher education.



63. TEPE 2023 POSTER Abstract submission

Minna Arvidsson, Helen Brink, Ann-Britt Enochsson, Liliann Byman Frisé, Kent Fredholm, Zara Hedelin, Anna Nissen & Annica Ådefors

Karlstad University

Abstract title: Micro-teaching for academic and vocational student teachers' transformation of content knowledge

Theme: Teacher education research for change: practice-based research for transformation

Abstract:

Student teachers who previously have gained academic knowledge or vocational skills often find it challenging to transform content knowledge into teaching activities that contribute to their future secondary students' learning. Student teachers express a need for pedagogical tools, time to practice, and opportunities for reflection. Previous research has shown that this can be achieved through *micro-teaching*, which in our interpretation implies that student teachers practice teaching 1) with a limited subject-specific content 2) for a limited amount of time 3) in a low-stakes situation. The aim of this study is to investigate in what ways micro-teaching can support student teachers in designing and conducting subject-specific and pedagogical teaching activities. Our research method is inspired by *action research*, and conducted in four steps. The first step is to carefully plan how to implement micro-teaching for student teachers in our own teaching. The second step is the implementation. In a third step, we evaluate student teachers' experiences from conducting micro-teaching through a survey and individual interviews. The fourth step involves analyzing the results, and adjusting our initial plan for implementation of micro-teaching, if needed. Together, these four steps make up the first cycle. We plan to conduct a second cycle before the research questions can be answered. At the time of writing, we are conducting a first cycle in different subjects. Since the study is still in its infancy, there are no results to report, but we expect to find both similarities and differences between the different subjects in how micro-teaching can support student teachers in transforming existing content knowledge into teaching activities.