

TRIINU SOOMERE

Doctoral students' perspectives
on learning about teaching
in the higher education context



TRIINU SOOMERE

Doctoral students' perspectives
on learning about teaching
in the higher education context



UNIVERSITY OF TARTU

Press

Institute of Education, Faculty of Social Sciences, University of Tartu, Estonia

Dissertation is accepted for the commencement of the Degree of Doctor of Philosophy in Education on May 3rd, 2024, by the joint Doctoral Committee of the Institute of Education and Institute of Ecology and Earth Sciences for awarding doctoral degrees in education, University of Tartu.

Supervisors: Associate Professor Mari Karm, PhD
Institute of Education, University of Tartu, Estonia
Associate Professor Torgny Roxå, PhD
Academic Development Unit, Lund University, Sweden

Opponent: Professor Mari Murtonen, PhD
University of Turku, Finland

Commencement: Institute of Education, room B148, University of Tartu,
Jakobi 5, Tartu, on June 18th, 2024, at 1.00 p.m.

This study has been supported by “Extending and reinforcing good practice in teacher development” co-funded by European Union ERASMUS+ Programme, number 2016-1-SK01-KA203-022551.

Co-funded by the
Erasmus+ Programme
of the European Union



ISSN 1406-1317 (print)
ISBN 978-9916-27-542-9 (print)
ISSN 2806-2434 (pdf)
ISBN 978-9916-27-543-6 (pdf)

Copyright: Triinu Soomere, 2024

University of Tartu Press
www.tyk.ee

CONTENTS

LIST OF ORIGINAL PUBLICATIONS	7
1. INTRODUCTION.....	8
1.1. Research problem.....	8
1.2. Aim and research questions	11
2. THEORETICAL FRAMEWORK	13
2.1. Research context	13
2.1.1. Doctoral education	13
2.1.2. Pedagogical course.....	14
2.1.3. The relationship between research and teaching in higher education.....	15
2.2. Learning and learning-centredness	18
2.3. University teachers' learning about teaching.....	24
2.3.1. Learning about teaching – formal learning for changing conceptions and approach to teaching towards learning-centredness	26
2.3.2. Learning about teaching – informal learning through conversations.....	27
2.3.3. Learning about teaching in an academic community.....	28
2.3.4. Learning about teaching – individual transformative learning .	31
2.4. Summary of the Theoretical Framework	34
3. RESEARCH METHODOLOGY	37
3.1. Research design	37
3.2. Research method.....	38
3.3. Selection of participants.....	39
3.4. Data collection	40
3.5. Data analysis	42
3.6. Trustworthiness of the study.....	46
3.7. Ethical considerations	49
3.8. Researcher's role and bias.....	50
4. RESULTS	52
4.1. PhD students' conversations that lead to learning about teaching: the interplay of formal and informal learning (Article I).....	52
4.2. PhD students' acceptance of the university teaching community's cultural norms and their own acceptance by the teaching community: a phenomenographic study (Article II)	54
4.3. PhD students' transformative change in teaching: a comparative case study (Article III)	59
4.4. Summary of main findings.....	63
5. DISCUSSION	67
5.1. Discussion of the key findings.....	67

5.1.1. Interplay of informal, formal and transformative learning	67
5.1.2. Learning in a community	70
5.1.3. Supervisors and learning about teaching	72
5.1.4. Transformative learning	75
5.1.5. Conclusion of discussion of key findings	77
5.2. Methodological discussion.....	78
5.3. Limitations and further research	81
5.4. Conclusions and implications of the study	82
APPENDICES.....	88
Appendix 1. Interview guide.....	88
Appendix 2. Research diary	90
REFERENCES.....	93
SUMMARY IN ESTONIAN	106
ACKNOWLEDGEMENTS	112
PUBLICATIONS	115
CURRICULUM VITAE	156
ELULOOKIRJELDUS.....	158

LIST OF ORIGINAL PUBLICATIONS

The dissertation is based on the following original publications, which are referred to in the text by their Roman numbers.

- I. **Soomere, T., & Karm, M.** (2021). PhD students' conversations that lead to learning about teaching: the interplay of formal and informal learning. *International Journal for Academic Development*, 26(3). <https://doi.org/10.1080/1360144X.2021.1951738>
- II. **Soomere, T., Karm, M., & Roxå, T.** (under submission). PhD Students' Acceptance of the University Teaching Community's Cultural Norms and by the Teaching Community: a Phenomenographic Study. *Journal of Further and Higher Education*.
- III. **Soomere, T., & Karm, M. Roxå, T.** (2024). PhD students' transformative change in teaching: a comparative case study. *Journal of Transformative Education*. <https://doi.org/10.1177/15413446241234214>

Author's contribution to the publications

The author contributed to the publications as follows:

- Article I: formulating the research questions, participating in data collection, carrying out data analysis in cooperation with the supervisor, writing the paper as the main author in cooperation with one of the supervisors (Mari Karm).
- Article II: developing the research design, formulating the research questions, designing the interview guide, participating in data collection, carrying out data analysis in cooperation with the supervisor, writing the paper as the main author in cooperation with supervisors.
- Article III: developing the research design, formulating the research questions, designing the interview guide, participating in data collection, carrying out data analysis in cooperation with the supervisors, writing the paper as the main author in cooperation with supervisors.

Related conference papers

- Karm, M., & Soomere, T. (2019). *Shaping PhD students' teaching conceptions through the interplay of formal and informal learning*. Single paper presentation. 18th biennial EARLI conference "Thinking Tomorrow's Education: Learning from the past, in the present and for the future", Aachen, Germany.
- Soomere, T., Karm, M., & Roxå, T. (2023). *PhD Students' Acceptance of the Teaching Culture and by the Teaching Community: a Phenomenographic Study*. 20th Biennial EARLI Conference "Education as a Hope in Uncertain Times", Thessaloniki, Greece.

1. INTRODUCTION

The following sections provide an overview of the research problem, as well as the aim of the dissertation and research questions.

1.1. Research problem

The Council of Europe (2021) has in its resolution stated that European citizens' education and training are crucial for their individual, civic and professional growth; central to this are educators and educational leaders at all levels. Throughout their careers, educators need support and the provision of learning opportunities to be proficient in their jobs and to feel inspired to excel (Council of Europe, 2021).

Over the last decades, there has been a shift in higher education policy towards a greater emphasis on teaching. A visible trend can be observed due to the large-scale growth of tertiary education, and due to policymakers' expectations that higher education will aid in the attainment of economic objectives and enhance the employability of graduates (Colet, 2016; Magnusson & Ryztzler, 2022, Sin, 2015). An example of this policy change towards an emphasis on teaching was the U-Multirank project funded by the European Commission, first carried out in 2010/11, where university rankings included a teaching and learning dimension, which was a deviation from the earlier Academic Ranking of World Universities, and from the Leiden Ranking where research was central (Gunn, 2018).

While policy documents suggest that quality of teaching is seen as being significant for driving innovation and transformation of society, there seems to be less interest from the higher education institutions to drive and support teaching skills development (MacPhail, et al., 2019). Even though it is generally accepted that Doctor of Philosophy (PhD) studies are aimed primarily at research, and much of the efforts during doctoral studies are focused on promoting the necessary skills, a need for learning about teaching and the development of teaching skills is becoming increasingly apparent for PhD students, regardless of whether they wish to have a successful career in academia or beyond. Earlier research indicates that PhD graduates will continue their careers both within and outside universities (Byrne, et al., 2013; Kindsiko et al., 2017). It is likely that some PhD students will continue their careers in non-PhD awarding educational establishments where the teaching quality is emphasised more than research output (Bergner et al., 2015). For example, in a study about career choices of Estonian PhD degree holders, alongside working in a university, employment as consultants and/or adult educators was prevalent in several domains such as humanities and the arts, social sciences, agricultural and veterinary science, as well as engineering and technology (Kindsiko & Vadi, 2017). Similar outcomes, in terms of working as a consultant after obtaining a PhD were indicated in a study of PhD graduates from Catalan universities (Access to..., 2017). Working as consultants, the ability

to explain complex domain-specific information to non-specialists requires skills akin to teaching. Adult educators also need teaching skills to function effectively in their roles. Therefore, the development of teaching skills can be seen as a transferrable skill necessary to many PhD students and degree holders, regardless of whether they work within or outside the academic environment. Overall, teaching skills are seen as a contributing factor to doctoral students' future career success (Edwards et al., 2014). As today's PhD students are likely to become tomorrow's professors and lecturers in universities, or to work in the capacity of consultants and adult educators outside academia (which requires skills akin to teaching), their approach to teaching and learning therefore has a role to play in facilitating student learning, in effectively communicating the complex scientific ideas of their domain to parties outside of academia, and in meeting the high demands of society for higher education.

In several studies, a lack of systematic preparation of doctoral students entering the ranks of academia in terms of teaching has been identified (Barney, 2019; Bergner et al., 2015; Jepsen et al., 2012; McGoldrick et al., 2010; Mycock, 2007; Rao et al., 2021). In a study of doctoral students with teaching responsibilities and junior academics employed by university, 40% of new faculty felt they were unprepared for their role as university teachers in almost every aspect of the job, and the results of the study indicated that there is not enough teacher training during PhD studies or when junior faculty start their employment in a university (Allgood et al., 2018). Looking at the bigger picture, Jepsen and colleagues (2012) point to problems associated with the lack of preparation for teaching. Namely, job dissatisfaction of junior faculty, among them PhD students, negative student feedback about their teaching and, most importantly, lack of student learning. These are all undesirable outcomes for universities.

A likely contributor to doctoral students being ill-prepared for the role of teaching is the lack of perceived value of teaching compared to research in higher education. This is due to research in universities being both valued more highly and recognised more than teaching (Chen, 2015; Kahn, 2020; Marsh & Hattie, 2002; Norton et al., 2010). Additionally, an interest in learning about teaching or developing one's teaching skills may depend on identity. Some academics identify solely as researchers and not as teachers (Brownell & Tanner, 2012) and changing that perception might be quite challenging (Vermunt et al., 2017). In a study conducted by Jepsen and colleagues (2012), 65% of PhD students' supervisors were reported to support the idea that their supervisees needed to concentrate on their research rather than attend teaching-related courses. At the same time, teaching has been reported to improve research skills (Feldon, et al., 2011). Similarly, in science, technology, engineering and mathematics (STEM) education there is reported to be a "pervasive notion of antagonism between research and teaching" (Shortlidge & Eddy, 2018, p. 3). For novice university teachers, lack of formal training and guidance, as well as time pressure are likely to lead to simply copying the style in which they themselves were taught (Knight, 2002). Therefore, the likely scenario for PhD students is the adoption of a content-centred (also known as teacher-centred) teaching approach, where teaching is

considered to be the transmission of knowledge from the more knowledgeable expert to passive students, as experienced in the student's own past. Furthermore, it might mean taking on the researcher-only identity, if this is prevalent in the university community, or role-modelled in the behaviour and attitudes of influential members of the PhD students' university community.

Based on the existing research in the area regarding preparation of PhD students for teaching, the conclusions seem to be unanimous: there is a need for preparing doctoral students to teach (Barney, 2019). Allgood and colleagues (2018) find that "just as success in research requires appropriate training, so does success in the classroom" (p. 209). The benefits of preparing doctoral students for teaching are plentiful. Brightman (2009) points to some of them: more effective teaching is likely to better support student learning, which in turn may lead to higher student retention rates. As in their teacher training, participants are likely to read literature pertaining to teaching and learning, doctoral students and junior faculty may thereby be more open to innovation in the classroom. By having preparatory courses and other teacher training opportunities, the beginner "survival" phase in teaching can be avoided or mitigated. For example, PhD students in marketing who had teacher training as part of their doctoral studies reported not only feeling more prepared for the job but also received higher student ratings (Johnston et al., 2014). As at least some PhD students are future colleagues of their supervisors, PhD students' better preparation for teaching could also benefit their supervisors if and when they teach a course together, or when the supervisor eventually passes the torch on to the next generation. Finally, if junior faculty struggle less with their teaching, they will have more time to dedicate to research (Brightman, 2009; Feldon et al., 2011).

Despite the recognition that doctoral students need preparation not only in how to do research but also in how to teach, the topic of teaching doctoral students how to teach has not received much attention in scientific literature (Barney, 2019; Bergner et al., 2015; Jepsen et al., 2012; McGoldrick et al., 2010; Mycock, 2007; Rao et al. 2021). A comprehensive overview of 995 research articles concerning doctoral studies over the last 40 years indicated that only 3% were dedicated to teaching (Jones, 2013). The scarce previous research (for example, Ayala, 2013; Mimirinis & Ahlberg, 2020; Remmik, 2013) which has focused on PhD students' teaching has demonstrated that their teaching conceptions range from content-centred (viewing teaching as focusing on what the teacher does to transmit information to students) to learning-centred (viewing teaching as supporting students as active agents in the learning process) (Postareff & Lindblom-Ylänne, 2008). However, little is known about how PhD students learn about teaching in higher education context. Earlier research has called for a deeper exploration of the teaching context and its influence on the conceptions of teaching of PhD students (Ayala, 2013). Additionally, calls have been made for further inquiry into the process of students' construction of knowledge and how various social, developmental and instructional factors may shape it (Schunk, 2016). Therefore, this doctoral thesis aims to contribute to this body of literature, with a particular focus on the interplay between formal and informal learning, how learning about

teaching is shaped by the university community and culture, and how approach to teaching could be transformed towards the learning-centred one.

1.2. Aim and research questions

The overall aim of the study presented in this doctoral thesis was to find out PhD students' perspectives on how different ways of learning shape their own learning about teaching. More specifically, how informal conversations about teaching, acceptance of the norms of the university teaching culture, acceptance of the PhD student by the community at university, and transformation of the PhD students' conceptions and approach towards learning-centredness shape their learning about teaching in the higher education context. Additionally, this study aims to provide an empirical basis for discussions concerning the development of teaching skills during doctoral studies, to develop recommendations for doctoral curriculum development in Estonia, and to make suggestions for the further enhancement of teaching at universities.

The following research questions were posed in the higher education context:

1. How does the formal pedagogical course support the informal conversations that facilitate learning about teaching from the PhD students' perspective? (addressed in article I)
2. How does the experience of acceptance in an academic community shape learning about teaching from the PhD students' perspective? (addressed in article II)
3. How does the process of transformative learning and its context shape learning about teaching and the transformation of conceptions and approach towards learning-centredness from the PhD students' perspective? (addressed in article III)

To answer these research questions, an empirical study adopting a qualitative approach based on qualitative semi-structured interviews was designed and conducted. The study employed qualitative research method, including a research design thematic analysis, phenomenography and comparative multi-case design to explore PhD students' learning about teaching. The results of the study relating to the first research question, which examined PhD students' informal learning about teaching in the form of conversations, were presented in the following original publication:

Soomere, T., & Karm, M. (2021). PhD students' conversations that lead to learning about teaching: the interplay of formal and informal learning. *International Journal for Academic Development*, 26(3).

The results of the study relating to the second research question, i.e. exploring learning in a community and the experiences of acceptance by PhD students of the teaching culture norms and of PhD students by the community, were presented in the following original publication:

Soomere, T., Karm, M., & Roxå, T. (under submission). PhD students' acceptance of the university teaching community's cultural norms and by the teaching community: a phenomenographic study. *Journal of Further and Higher Education*.

The third research question focused on how PhD students describe the transformation towards learning-centredness and how their teaching-learning environment enables them to implement their transformed teaching conception/approach. The results were disseminated in the following publication:

Soomere, T., Karm, M. & Roxå, T. (2024). PhD students' transformative change in teaching: a comparative case study. *Journal of Transformative Education*.

The thesis is organised into five parts. After the introduction, in Chapter 2, a theoretical framework of the dissertation is provided. This provides the research context, gives an overview of doctoral education, background of the pedagogical course completed by all participants, and outlines the relationship between research and teaching in higher education. Additionally, the key concepts of learning and learning-centeredness, university teachers' learning about teaching and different ways of learning about teaching are introduced, including formal, informal, community-based, and transformative learning. Chapter 3 outlines the research design, method, participants, data collection and analysis, trustworthiness of the study, ethical considerations and the researcher's role and bias. Chapter 4 gives an overview of the results. Chapter 5 includes a discussion of the most important findings and notes limitations of the study and suggestions for further research as well as conclusions and implications.

2. THEORETICAL FRAMEWORK

The central thematic axes of the thesis are learning and doctoral students' learning about teaching in the higher education context. To this end, the following sections provide a theoretical overview of learning and of different ways of learning about teaching. To provide a wider context for the discussion of doctoral students' learning about teaching, an overview of doctoral education is provided first, followed by a description of the pedagogical course completed by all participants of the study and an overview of the relationship between research and teaching in universities. Next, theoretical perspectives on learning, learning-centredness and learning about teaching are introduced. This is followed by a short historical overview of university teacher's learning about teaching. The focus then turns more specifically to the different elements of learning about teaching, namely, formal learning, informal learning through conversations scaffolded by a pedagogical course, the context where learning takes place, socialisation and acceptance by the university community, and acceptance of the university community's cultural norms. Finally, the depth of learning, from the perspective of individual transformative learning, with learning-centredness at its core, is examined.

2.1. Research context

2.1.1. Doctoral education

The following section describes Estonian doctoral education within the European context to provide a background for the study and to help to judge if and how the research findings are transferable. The outcomes of doctoral education are defined as “contribution to society through knowledge, competences and skills learnt by undertaking research, as well as awareness and openness towards other disciplines” (European University Association Council for Doctoral Education, 2010, p. 5). The aim of structured doctoral education is the provision of support and training for doctoral students while acknowledging that different nations, disciplines, universities and students may need different skillsets (Hasgall & Peneas, 2022). Research and research methodology are at the core of the skills developed; however, teaching transversal skills, including teaching, has increased to support the career progression of PhD candidates (Hasgall et al., 2019).

In Estonia, the aims and basic requirements of doctoral education are stipulated in the Higher Education Act § 8 (Riigikogu, 2019). During their doctoral studies, students are required to develop sufficient knowledge, skills and attitudes to undertake further independent research, development or creative work. Doctoral studies take between three to four academic years to complete with extended study periods granted for taking care of a child up to three years of age, undergoing conscription or alternative service, and other exceptions outlined in the study programme. During their studies, students are regularly assessed on the

progress of their studies and research. The procedures for these evaluations are established by each university. Once the studies are completed, a doctoral degree is awarded.

Expectations for doctoral studies are also determined according to the eight-level Estonian Qualifications Framework (EstQF), which was established in 2008 by the Professions Act. The learning outcomes for all qualifications are described in levels, with the doctoral qualifications belonging to the highest (eighth) level as depicted in Table 1:

Table 1. Doctoral level qualifications. Estonian Qualifications Framework (Kutsekoda, 2008)

Knowledge (described as theoretical and/or factual)	Skills (described as cognitive: involving the use of logical, intuitive and creative thinking, and practical: involving manual dexterity and the use of methods, materials, tools and instruments)	Scope of responsibility and autonomy
Knowledge at the most advanced frontier in the field of work or study and at the interface between fields	The most advanced and specialised skills and techniques, including synthesis and evaluation, required to solve critical problems in research and/or innovation and to extend and redefine existing knowledge or professional practice	Demonstrate substantial authority, innovation, autonomy, scholarly and professional integrity and sustained commitment to the development of new ideas or processes at the forefront of work or study contexts including research

In Estonia, all doctoral programs in the academic year 2022/23 included either a compulsory or an elective course dedicated to teaching; some programs included teaching practice and other teaching-related courses (Tallinn Technical University, n.d.; Estonian Business School, n.d.; Tallinn University, n.d.; Estonian University of Life Sciences, n.d.; University of Tartu, n.d.; Estonian Academy of Arts, n.d.; Estonian Academy of Music and Theatre, n.d.).

2.1.2. Pedagogical course

As noted above, there are several possibilities for Estonian PhD students to participate in pedagogical courses. In the current dissertation, all study participants had completed a pedagogical course offered by the University of Tartu either in the Estonian language or the English language group. It was a six-credit point (ECTS) course lasting one semester, 52 academic hours of which were conducted face-to-face. These were organised over eight days as six-hour sessions. The aim of the course was not only to hone teaching skills but to develop students' deeper understanding of the learning-centred approach and to foster reflection about

teaching. The pedagogical course had three main objectives. Firstly, it aimed to enhance students' comprehension of the learning-centred approach and equip them with strategies for actively engaging students in the learning process. Secondly, it sought to elevate the perceived importance of teaching. Finally, it aimed to encourage students to talk and reflect about teaching. Throughout the course, students undertook various tasks, such as developing a syllabus, delivering a 15-minute lesson to peers that incorporated student engagement techniques, creating a workshop plan for adult learners, and compiling a learning portfolio. The portfolio incorporated an essay on learning and teaching, a learning log, and a compilation of reflective writings produced during the course. Importantly, the course offered students the chance to critically evaluate their teaching perspectives and experiences through a theoretical lens.

2.1.3. The relationship between research and teaching in higher education

University teacher's learning about teaching should be viewed in relation to its context. The following sub-chapter aims to review both the global and the Estonian context so as to better understand the relationship between teaching and research in universities.

As stated above, previous research suggests that research in universities in general tends to be valued more highly and recognised more than teaching (Chen, 2015; Geschwind & Broström, 2015; Marsh & Hattie, 2002; Norton et al., 2010). The Mertonian norms, and later additions to his original idea, regarding the work done in universities, indicate that it should not be this way. In 1942, Robert K. Merton in his seminal work described the elements of scientific ethos known later as Mertonian norms as follows: universalism, communism (communality), disinterestedness and organised scepticism (Merton, 1973 [1942]). A core principle of the norms is that of collective collaboration, open communication and shared knowledge. In the same vein, Science Europe, today, proclaims that "Collaboration, balanced against competition, is necessary to support quality" (Science Europe, 2023, p. 9). From a more critical viewpoint, Mitroff (1974) suggested four "counter-norms": solitariness, particularism, interestedness and organised dogmatism (Mitroff, 1974). He claimed that to gain priority in publishing, patenting or applications, scientists do not openly share their latest findings. This principle is further exacerbated by the understanding that, on an individual level, scientists compete with others for funding, recognition and career advancement opportunities. In a qualitative study of scientists in research universities, which explored subscription to the original and to the counter-norms, and determined additional norms, another counter-norm was found: that of narrowness. Whereas the norm for researchers is to be engaged in a broad range of activities – teaching, research and service – the narrowness norm prioritises science in the allocation of time and effort (Anderson et al., 2010).

The norm of narrowness may have its roots in the Humboltian ideal of universities. Teaching in this tradition was considered to be based on, informed by and inspired by research, and universities' wider aim was to develop individuals and to improve society (Freiberg, 2015). However, it might be questionable whether researchers with these ideals had a positive impact on student learning, or interacting with students led to the betterment of society or research (Magnusson & Rytzler, 2022).

The relationship between teaching and research was also affected by the changes in higher education at the end of the 20th century. This period in universities was shaped by increased enrolment in higher education. Participation in tertiary education grew globally from 68 million in 1991 to 164.5 million in 2009 (Crosier & Parvev, 2013). According to the OSCD (2020), between 1998 and 2018, the proportion of the population with university-level education increased from approximately 23.8% to 44.5%; furthermore, during the period between 2009–2019, the proportion of younger adults with tertiary education across OECD countries rose by approximately 10%. This massive growth in tertiary education had an impact on education policy. Other consequences included a considerably diversified student body, with correspondingly diverse expectations, as well as a shift in how society viewed the role of universities in societal improvement.

Changes in higher education led to a series of political decisions in Europe where the value of teaching was brought more to the fore. The main reasons for the change had to do with development of knowledge societies where universities were seen as providers of the knowledge that would make economies more resilient and competitive (Cosier & Parev, 2013). In the period following the two World Wars, this was exemplified by the expectations on universities to contribute to the advancement of science and technology (Williams, 2016). In the ministerial conference in Bucharest in 2012, the need for universities to provide students with sufficient skills and knowledge to guarantee their employability was emphasised and a call for a stronger link between research, teaching and learning was made (Bucharest Ministerial Communique, 2013). Some years later, the Paris Communique (2018) stated:

As high quality teaching is essential in fostering high quality education, academic career progression should be built on successful research and quality teaching. It should also take due account of the broader contribution to society. We will promote and support institutional, national and European initiatives for pedagogical training, continuous professional development of higher education teachers and explore ways for better recognition of high quality and innovative teaching in their career. (p. 4)

While teaching has received more attention in policy documents in recent decades, there tends to be a divide between what is stated in policy documents and how universities are funded and evaluated. On the university level, prioritisation of research over teaching may have firstly to do with financial considerations. For example, in Estonia, support from the state budget is divided into two: activity support and targeted support. Activity support is aimed at the

organisation and development of higher education level studies and towards carrying out the institution's mission. In general, Estonian universities' revenue base is divided into three (although there may be significant differences between universities): 47% of financing comes from income generated from domestic and foreign sources for educational, research, development and creative activities; 35% comes from activity support and targeted support for higher education; 9% comes from research grants and 8% comes from state baseline research funding (Kanep, 2021). Baseline research funding is only allocated to institutions that have received a regular positive evaluation. One of the criteria for allocation of baseline funding is "high level publications in internationally recognised journals, the number of high-level research monographs and the number of registered patents" (§ 15¹ (3) 1). It follows that having high level research is essential for receiving the baseline funding to carry out research. As salaries in higher education in Estonia remain low, research-intensive universities can provide higher salaries by generating more funding for research, which means that research duties are prioritised, replacing teaching duties to some extent, as was the case in the Tallinn University of Technology renewed career model (Kanep, 2021). It is therefore natural for universities to emphasise research productivity over teaching quality, as the former is easier to measure and can lead to concrete financial outcomes.

Furthermore, the prioritisation of research over teaching becomes evident when publicising a university's position in international rankings. All research-intensive universities in Estonia report on their international ranking (e.g., Estonian University of Life Sciences, 2023; Tallinn University of Technology, 2019; University of Tartu, 2023b). Such rankings are based on research citations, as well as global surveys of employers and academics. Student learning or application of a learning-centred teaching approach is not included in the methodology for ranking universities. There are, however, new initiatives that include in university rankings teaching quality aspects such as the Teaching Excellence Framework (TEF) in universities in the United Kingdom. In recent years some countries, for example in Scandinavia, have created alternative teaching career tracks and adopted academic titles such as "merited teacher" or "excellent teacher" alongside research-track titles such as "reader" or "associate professor" to support the value of teaching (Magnusson & Rytzler, 2022).

At the university academic staff level, when examining their hiring and promotion criteria, the emphasis on research becomes even clearer. Academic staff job descriptions remain considerably more nebulous on the evaluation and promotion criteria in the area of teaching than on research. For example, looking specifically at Estonian universities, in the University of Tartu faculty of Science and Technology, positive evaluation and promotion criteria concerning teaching involves "Effective supervision of at least two doctoral students" and "Compilation of teaching aids and materials for institutions of higher education in the past five years" (University of Tartu, 2023a, p. 8). In the faculty of Arts and Humanities the list is longer, including alongside the same requirement for doctoral thesis supervision "teaching at all levels of higher education in the past five years; the compilation of at least one peer-reviewed higher education textbook as

the sole author or participation in the compilation of at least three such higher education textbooks; participation in teaching training or other teaching-related development activities in the past five years” (p. 8). Tallinn University of Technology (2023) also lists performance evaluation criteria for professors in relation to conducting studies at different levels of higher education, participating or chairing defence committees, delivering guest lectures in other universities, managing study programmes, participating in advisory boards, participation in pedagogical courses (to the value of six ECTS) and mentoring colleagues. Where the Tallinn University of Technology categories differ compared to those of the University of Tartu is in the student feedback, where the average score must be at least four points. Research effectiveness, which is described in considerably more detail in the hiring and promotion criteria, therefore becomes more significant in decision-making both when hiring and when promoting academic staff. While universities are trying to pay more attention to teaching quality in the assessment and promotion criteria of academic staff, the focus on learning-centred teaching is not quite clear. Quantifying teaching outcomes (such as with student feedback scores) might seem like a reliable means of assessing teaching quality but basing judgements solely on student feedback has been shown to be unreliable (Gibbs, 2013; Roxå et al., 2022). Attendance of pedagogical courses has also been demonstrated to have varying outcomes (Gosling, 2008; Postareff et al., 2008). However, given such tendencies in career progression and considering the financial constraints of universities, it is not difficult to understand why research might be seen as more important in universities and prioritised over teaching.

2.2. Learning and learning-centredness

As the central theme of the dissertation is learning, it is necessary to address learning through the perspectives of learning-centredness and constructivism which form the philosophical groundwork of the dissertation. The key terms used in the studies that form the basis of the dissertation and are related to learning are defined in the following subchapter.

There is no single, uncontested definition of learning (Schunk, 2016). Illeris (2007, p. 3) has defined learning as “any process that in living organisms leads to permanent capacity change and which is not solely due to biological maturation or ageing.” He posited that there are three main dimensions of learning: content, social and incentive. The content dimension involves knowledge, skills and attitudes and leads to permanent capacity change; the social dimension involves interaction with and within the learning environment, and the incentive dimension involves emotions, motivation and volition (Illeris, 2002; 2007). The learning perspective proposed by Selander et al. (2021) complements the three dimensions proposed by Illeris: “...learning takes place in cultural and social processes that aim at the development of individual human beings. The goal is not only the acquisition of cognitive knowledge, but also the formation of

emotions, senses, body, language, imagination, and democratic and social behaviour” (Selander et al., 2021, p. 2). This doctoral dissertation aligns with these definitions of learning and investigates PhD students’ learning about teaching from the view of obtaining pedagogical knowledge, but also considering the environmental, cultural and social processes of learning about teaching.

Numerous learning theories have been developed to explain how learning occurs. The three most common ones are behaviourism, cognitivism and constructivism (Eryaman & Genc, 2010). This doctoral dissertation adopts the theoretical perspective of learning of *constructivism*. At the centre of it is the focus on the individual who constructs what and how they learn and understand (O’Donnell, 2012). As constructivism has different strands, this doctoral thesis aligns with dialectical constructivism referring to the idea that learning stems from the interaction between individuals and their environment (Rogoff, 1990). Moshman (1982) categorised the constructivist perspective into three main interpretations, positioning them along a continuum. On one end there is *exogenous constructivism* and on the other *endogenous constructivism*, with *dialectical constructivism* in the middle. Examining the extremes, *exogenous constructivism* underscores the external aspect of knowledge. It assumes that “reality” is comprehensible, and effective teaching/learning occurs when a teacher assists a learner in internalising an accurate representation of external reality. Conversely, *endogenous constructivism* emphasises the internal aspect of knowledge. It posits that knowledge is not derived solely from external experiences but is constructed through the reorganisation and reconstruction of existing internal mental frameworks in response to new experiences. *Dialectical constructivism* lies between these extremes, accentuating the interactive nature of knowledge development, considering it a dynamic interplay between the learner’s internal knowledge and the external environment. Essentially, learning occurs through constructing internal models of external structures brought about through instruction, filtered through and influenced by prior experiences, beliefs, culture, and language, and shaped by interactions with others. The focus of dialectical constructivism is on deeply exploring the meaning of a phenomenon that is refined through interactions, debating, comparing, sharing, as well as helping others to find and refine the meaning. This approach was considered suitable to deeply explore the experiences of PhD students’ learning about teaching in a higher education context through their interactions with others during and after a pedagogical course, as well as through their interactions with members of the academic community. Even transformative learning that shifts meaning perspectives (Mezirow 1994, 2009), and shifts towards learning-centredness (Kember & Kwan, 2000; Postareff & Lindblom-Ylänne, 2008), and which may appear to be highly individualistic, is, on closer inspection, socially constructed, shaped by the teaching-learning environment and based on interactions with students, peers, other university teachers and mentors.

Another key term used in the current dissertation is learning-centredness. The term has variations and may also be referred to as “learner-centredness” or “student-centeredness”. While it might be argued that consideration of the learner

(for example, taking into account their prior knowledge) and the learning process (for example, selecting appropriate methods conducive to learning) are not the same, it can nevertheless be argued that, in both cases, the focus has shifted from what the teacher knows and does in a teaching-learning situation or from what content a course or curriculum should contain to the facilitation of learning. This is a departure from the teacher-centric content knowledge dissemination approach that allows the student and their learning experiences to become the focus of the thinking about and planning for learning (Colet, 2016). Learning-centredness denotes a shift in thinking about learning and teaching such that learning becomes the key output instead of teaching (Nygaard & Holtham, 2008). For consistency, the term “learning-centeredness” is used throughout this dissertation to incorporate the various conceptualisations of learner- and student-centeredness as described below.

The term learning-centredness has been reported to be a difficult one to define (Schweisfurth, 2013). Learning-centred approach considers teaching as a facilitating activity whereby the students are active participants in the process, whereas the content-centred approach is focused on the provision of information and the role of students is passive (Kember & Kwan, 2000; Postareff & Lindblom-Ylänne, 2008). Bremner (2021) in a meta-analysis of 326 articles that focused on finding commonalities between “learner-centred” and “student-centred” definitions found that six categories were mentioned the most often. These were, in order of frequency:

- “Active participation” (learning by doing, learner in an active role in and outside the classroom);
 - “Interaction” (communication with other learners and the teacher, use of group and pair work);
 - “Adapting to needs” (consideration of learners’ previous knowledge, skills, experiences, and needs);
 - “Autonomy” (learner takes responsibility for own learning);
 - “Power sharing” (decision-making shared with peers and the teacher; power distance between teacher and learner reduced);
 - “Real-life skills” (meaningful and relevant to learner’s life);
 - “Higher order skills” (not only memorising information); and
 - “Metacognition” (learning to learn).
- The aspects that were mentioned less frequently were “Formative assessment” and “Humanistic role” (Bremner, 2021).

Learning-centeredness builds on a number of theoretical perspectives. Firstly, on Abraham Maslow’s humanistic learning theory (Maslow, 1970) which sees learning as a natural part of existence with the motivation for self-actualisation. Secondly, on Carl Rogers’ (1969; 1983) theory of experiential learning which

also emphasises using one's full potential to actualise oneself. Rogers claimed that there are two types of learning: cognitive and experiential. He considered the latter significant as it denoted a deeper change and personal growth. Rogers also viewed teaching as a facilitating activity, empowering the learner and allowing them to be in control of what and how is learnt, focusing the content of learning towards what is relevant to the learner and eliminating any threats to self in the process of learning. Reflection as a key aspect of learning came to the fore with the concept of "reflective practitioner" by Schön (1983) and with the development of the transformative learning theory by Mezirow (1991). Schön (1983) argued that the implicit knowledge and learning from work experience (reflection *in* action and reflection *on* action) are of greater importance than textbook knowledge. Mezirow (1991) placed a great emphasis on reflection in learning, claiming that critical reflection allows profound learning experiences and shifts in perspectives.

Biggs and Tang (2011) define learner-centredness as combining teaching and learning. They view effective teaching as supporting learners in activities that help them to achieve their intended learning outcomes. Biggs and Tang (2011) summarise three theories of teaching that differ in their focus:

- Level 1 focuses on differences between learners, including their ability, motivation and cultural background, which explain differences in their learning. If learners have difficulty learning, this is attributed to something they are lacking for which the teacher cannot be held accountable nor expected to take responsibility. The teacher's focus is on being a knowledgeable expert and transmitting information, which learners are expected to be able to report back.
- Level 2 focuses on teacher's activities, classroom management (establishing rules, use of visual aids etc.) and teaching competencies (how to use technology in teaching, how to debate etc.). Alongside information, this level also focuses on the transmission of concepts and understandings. However, teaching competence may not be directly related to teaching effectiveness when learning is not the focus.
- Level 3 teaching focuses on learners' activities and on facilitating learning to obtain learning outcomes at specified levels, which is the essence of learning-centredness (Biggs & Tang, 2011).

Nygaard and Holtham (2008) discuss the term "learning-centredness" from a wider perspective. They argue, similarly to Biggs and Tang (2011), that in the past, too much emphasis in higher education has been placed on content rather than on the learning process and on teaching as a key output rather than on learning. This is particularly noticeable in Nygaard and Holtham's (2008) opinion that higher education curricula are built on the assumption that student learning takes place if knowledge is imparted by teachers. This means that good teaching is equated to effective delivery of content, not facilitation of learning. Nygaard and Holtham (2008) claim that a shift towards learning-centredness can take place if there is

due consideration of the university's internal (students, teachers, administration, faculties, departments) and external (politicians, the media, employers) stakeholders, as well as the complexity of the context.

Learning-centredness has also received its share of criticism. For example, it has been argued that it enforces the students' right to disrespect teachers and belittle their knowledge, and it functions as a tool of oppressing teachers, forcing them to follow an ideology blindly (Ha, 2014). In the words of a university teacher in Ha's (2014) study: "Too little time is spent on teaching, and too much on fruitless discussions and fiddling around with technology. [...] Student-centred learning for us meant student rule. It was great fun. We just didn't learn much." (p. 403). Furthermore, in a higher education context, academics have expressed their concerns about the educational reforms, including the Bologna process and introduction of outcomes-based curricula as well as the learning-centred approach. For example, Rūta Petkutė (2022) in a qualitative exploratory case study explored the experiences of individual academics in their real-life context in Lithuanian higher educational institutions, including their experiences of European educational initiatives, such as the transitions into a learning-centred approach and into an outcomes-based curricula. She reported that the reforms were perceived by academic staff in her study as hierarchical, managerial, infringing upon academic freedom, and market-driven, forcing academics to abandon their academic values and lower their academic standards. Learning-centeredness was seen by academics in the study as a marketing tool to attract students as customers, unrelated to the quality of education. Moreover, according to the results of Petkutė's (2022) study, academics viewed rigidly defined learning outcomes as restricting the free pursuit of knowledge and as unnecessarily shifting students' focus onto anticipated results instead of onto the "substance of education" (Petkutė, 2022). Academic teachers have also voiced their concerns about the challenges of adopting a learning-centred approach, including the reduced amount of time available to dedicate to research which may lead to reduced credibility as a researcher (Handelsman et al., 2004), and the feeling of being overwhelmed by the expectation to use student-centred teaching methods about which they may not have prior knowledge and which may take a considerable time to learn (Geven & Attard, 2012).

Difficulties in defining what learning-centredness encompasses have led to some confusion as to what it is. For example, the nature of the altered student-teacher roles and relationships in the learning-centred approach remains unclear. Jones (2007) states that, in a learning-centred classroom, the students do not make all the decisions, but there is a democratic dialogue with the students which aims to engage them in the learning process, and which considers the needs of both individual students and students as a group so as to facilitate the learning process (Jones, 2007).

As can be seen from the abovementioned criticism, it seems that all reforms in higher education are equated with learning-centredness. Perhaps on the institutional level the reforms have not been carried out in the most constructive manner nor even fully supporting the learning-centred approach. The criticism has

also been aimed at treating the student as a consumer. As James Groccia (1997) suggested, learning is not a service one can buy, instead, it is a consequence of the student's deliberate effort; a true learner is someone who generates knowledge rather than simply consuming it. Hence, on closer inspection, none of the points of criticism deal with the essence of learning-centredness that is aimed at facilitating student learning. The criticism mostly tends to focus on teaching methods; however, a constructivist approach goes beyond simply choosing the right methods. Instead, it looks at the relationship between teaching and learning and the nature of how learning is constructed. To make shifts in thinking smoother, a reframing which involves an invitation to think differently and to examine underlying assumptions closely could be employed; however, it must be acknowledged that it may be challenging to have one's beliefs contested (Ellis, 2018). Therefore, it is essential that academic teachers are aware of what the learning-centred approach is or is not and examine their assumptions critically as they approach their research.

When discussing learning-centredness, it is necessary to address conceptions and approaches to teaching and learning. Conceptions of teaching and learning are beliefs that influence perceptions and behaviours concerning teaching and learning (Dejene & Song, 2020). Approaches to teaching, on the other hand, have been defined as "strategies teachers adopt for their teaching" (Postareff & Lindblom-Ylänne, 2008, p. 110) and these are divided into content-centred and student-centred (Kember & Kwan, 2000). Conceptions of teachers are important because there is a connection between teachers' conceptions about teaching and learning, and actual student learning (Roxå & Mårtensson, 2009). Furthermore, conceptions of teaching and learning have been connected to ways of behaving (Marton & Booth, 1997). Hence, it could be argued that if a teacher holds learning-centred conceptions about teaching and learning, they may also behave in teaching situations in ways which support student learning. Prosser and Trigwell (1999) claim that "university teachers who focus on their students and their students' learning tend to have students who focus on meaning and understanding in their studies, while university teachers who focus on themselves and what they are doing tend to have students who focus on reproduction." (p. 142). Hence, teachers' conceptions of teaching matter in terms of student learning. However, it has been demonstrated that people do not always act according to what they believe (Bueddefeld & Van Winkle, 2018). Furthermore, there might be barriers to the intended behaviour, such as lack of control or emergence of unexpected events (Ajzen & Fishbein, 2005). It is therefore possible to have a positive attitude towards learning-centred teaching but not adopt the behaviour to support learning-centred teaching.

It has not been definitively established whether changes in conceptions should take place before changes in the teaching approach or vice versa. Devlin (2006) and Guskey (2002) argue that if the teaching approach is changed to become more learning-centred, conceptions of teaching are likely to follow. However, the majority of studies concerned with changing academics' teaching approaches report the opposite: the teaching approach changes after a change in teaching

conceptions (Åkerlind, 2004; Ho et al., 2001). Participation in pedagogical courses could potentially help transform conceptions into learning-centred ones (Andersson et al., 2013). However, earlier studies have indicated that while university teachers who have undergone pedagogical training have reported increased confidence in teaching (Ödalen & Fogelgren, 2019), the connection between formal training and change in conceptions of teaching and learning remains tenuous (Gunn & Fisk, 2013).

It is known that Estonian academic teachers' conceptions tend to be content-centred. The head of the Estonian Quality Agency for Education has conceded that, based on the accreditations of Estonian higher education institutions, teaching has remained "traditional" and academic teachers still view teaching as the transmission of information, despite some exceptions during the COVID19 pandemic which forced academic teachers to reevaluate teaching and give more responsibility to students (Mattisen, 2021). What is known from previous studies about PhD students' teaching conceptions is that they vary from content- to learning-centred (Ayala, 2013; Mimirinis & Ahlberg, 2020; Remmik, 2013). However, very little is known about PhD students' conceptions of teaching or about how these could be transformed into learning-centred ones (Ayala, 2013).

In this dissertation, what comes first, the change in conceptions or in approach is considered, with both possibilities remaining open. PhD students' learning about teaching was explored within the framework of a pedagogical course serving as a source of possible conceptual change. The context of the academic community and its significance for the intended behaviour was also considered, as was the process of transformative learning which may have a significant effect on both change in conceptions and teaching approach as well as on reported classroom behaviour.

2.3. University teachers' learning about teaching

Learning-centredness has not always been the focus in university teaching and it is linked with preparing university teachers to teach. Learning about teaching in universities has evolved over time. The following subchapter provides an overview of university teachers' learning about teaching.

Preparing university teachers for teaching has historically been linked to research, as universities did not require teachers to undergo pedagogical training and the Humboldtian tradition saw teaching not as a separate area but as part of research, and learning about teaching took place within the research community (Murtonen & Lappalainen, 2013). Higher education teachers were seen as being knowledgeable and fully equipped to teach as they were experts in conducting research (Gillespie & Robertson, 2010). In the 1990s, Boyer (1990) introduced the idea of scholarship of teaching, which meant keeping knowledge about teaching current, reflecting on one's own teaching through theory, and utilising that knowledge in one's teaching to support student learning. Boyer's idea has

since been developed into what is today known as scholarship of teaching and learning.

Gibbs (2013) viewed university teachers' learning about teaching from a wider perspective and suggested three ways of developing university teaching and learning. Firstly, by focusing on individual teachers (e.g. classroom teaching with consultations, discussions of teaching philosophy and classroom practice linked to teaching theory), secondly, by focusing on groups of teachers (e.g. department-wide discussions about teaching, curriculum and program-wide teaching change) and, thirdly, by focusing on the institution (e.g. changing promotion criteria to emphasise the value of teaching, developing facilities to better support learning). However, it has been highlighted that learning about teaching and making permanent changes in teaching in a university context is not only an individual's activity, and is heavily influenced by the local culture, including the extent to which teaching is valued in the respective institution or department and leadership (Gibbs, 2013).

Over the past decades, a shift towards mandatory individual pedagogical training for university teachers has occurred in several European countries, such as Norway, the United Kingdom and Sweden (Chalmers & Gardiner, 2015). In other countries, for example in Finland, participation is voluntary (Vilppu et al., 2019). In Germany and Switzerland, medical faculties and universities of applied sciences demand teaching qualifications from their academic teachers (Hughes et al., 2023).

Similarly to the German and Swiss example, in Estonia, the Standard of Higher Education (2019) deals with teaching. The document distinguishes between four categories of academic teaching staff: professor, lecturer, teacher and researcher. Compulsory pedagogical training is required only of "teacher" level higher education academic staff, while professors and lectures are required to have "pedagogical knowledge and skills" (Standard of Higher Education, 2019).

Although, historically, learning about teaching and developing teaching skills may not have been required of academic teachers, today in the Paris Communique the European ministers of education have called for the "full implementation of student-centred learning" (Paris Communique, 2018, p. 3). Implementing a learning-centred approach relies on competent teachers who are willing to actively engage students (Gover et al., 2019). PhD students who pursue an academic career have three main duties: original research, outreach activities and teaching. Therefore, it is these students who are expected to fulfil the expectation of adopting the learning-centred approach to teaching.

The following subchapters provide an overview of different ways of learning about teaching. The first way of learning about teaching introduced is formal learning.

2.3.1. Learning about teaching – formal learning for changing conceptions and approach to teaching towards learning-centredness

The following subchapter provides an overview of learning about teaching in a formal pedagogical course and its possible significance for changing conceptions and approach to teaching.

Doyle (2023) has argued that while university teachers have not always received formal education about teaching themselves, they can positively affect student learning, given that they obtain knowledge and skills to support learning in different ways and that they understand the teacher's role in creating opportunities for an environment conducive to learning (Doyle, 2023). Learning about teaching may indeed occur in different contexts and ways (see Figure 1). Knowledge about teaching may be acquired in formal learning contexts or in informal ones. The context itself does not determine the sophistication of the knowledge gained (McCarthy & McNamara, 2022).

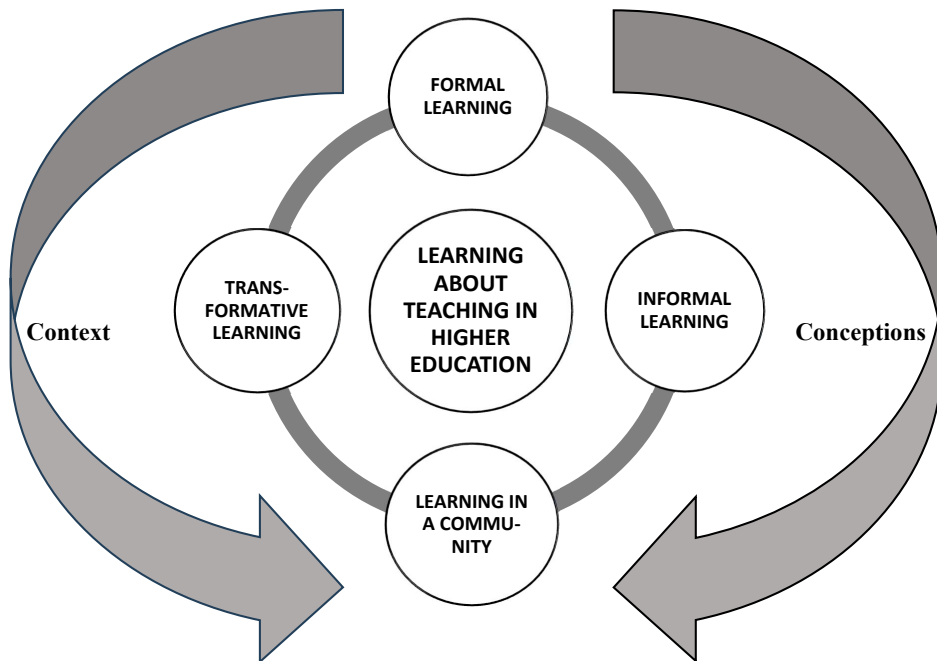


Figure 1. Learning about teaching in higher education.

Formal learning has most often been suggested as a way of learning about teaching. One of the aims of formal pedagogical courses is to change academic teachers' teaching conceptions and to help them to become more learning-centred in their approach (Saroyan & Trigwell, 2015). Nevertheless, when university teachers attend pedagogical courses, the outcomes may vary. Some authors claim that formal pedagogical courses have a significant impact on conceptions of teaching

and learning, and teaching skills (Aščerc Veniger, 2016; Postareff et al., 2008) while others claim that the link between pedagogical courses and improvement of student learning is weak or even unproven (Gosling, 2008). What also needs to be considered is that the effect of pedagogical courses may become apparent over a longer term, not necessarily immediately upon completion (Olsson & Roxå, 2013; Postareff et al., 2008). Additionally, it has been suggested that instructional development interventions spanning a period of time tend to yield more favourable behavioural outcomes than do one-time events (Stes et al., 2010).

Furthermore, some studies indicate that the duration of formal pedagogical courses matters and that longer courses (from six months to one year) are more effective (Chalmers & Gardiner, 2015; Ödalen & Fogelgren, 2019). On the other hand, in a study investigating the participants' interpretations of teaching/learning situations, the results indicated that a shift in conceptions towards learning-centredness may take place during a short online course (five weeks) and that this shift was most noticeable in beginner teachers, especially PhD students (Vilppu et al., 2019). The same authors call for formal pedagogical courses to be offered at the very beginning of the university teaching career, i.e. during doctoral studies. The same conclusion is reached by Mladenovici & Ilie (2023), who add the need to focus on self-reflective methods during pedagogical courses. Pedagogical courses may also scaffold conversations about teaching where something is learnt about teaching and subsequently discussed.

2.3.2. Learning about teaching – informal learning through conversations

Both formal and informal learning provide opportunities for learning about teaching. While different in their form, formal and informal learning should not be seen as extremes on a spectrum (Kyndt et al., 2016). Instead, they should be viewed as complementary in nature – formal learning on its own may stay too theoretical and needs to be supported by informal learning, while informal learning on its own may be insufficient for deep understanding (Ellström, 2001). Therefore, there should be an interplay between these two forms of learning.

Informal learning may occur, for example, in the form of conversations in the workplace (Thomson, 2015) and outside of it (Pyörälä et al., 2015). Ley et al. (2014) propose a model of informal learning in the workplace that incorporates firstly task performance, reflection and sensemaking, secondly, help with seeking guidance and support from the collective knowledge and, finally, the emergence and maturing of collective knowledge. Informal conversations about teaching, as a form of informal learning, also facilitate learning about teaching (Knight et al., 2006). These conversations provide an opportunity to solve problems, seek advice and deal with difficulties (Pyörälä et al., 2015; Thomson & Trigwell, 2018); they are spontaneous in nature, honest and deal with urgent issues (Haigh, 2005). What is learned from the conversations may encompass several areas – earlier studies

have highlighted teaching content and improvement of teaching and learning in general (Patarraia et al., 2015; Pyörälä et al., 2015; Thomson & Trigwell, 2018).

Pyörälä et al. (2015) indicate that having pedagogical experts as conversation partners is beneficial to teachers both in terms of pedagogical thinking and practice (Pyörälä et al., 2015). In general, these conversations have been reported to contribute to university teacher's development of teaching (Aškerc Veniger, 2016). Very few studies have addressed the conversations about teaching of PhD students. Simona and Pleschová (2021) report that PhD students name their dissertation supervisor most often as the most significant conversation partner; however, the relationship between the supervisor and the PhD student may be altered after the PhD student completes a pedagogical course and their conceptions of teaching start to differ.

Learning from conversations, as a form of informal learning, has a number of limitations. The circle of people with whom one has conversations shapes the content of what is discussed and what is learnt about teaching. Generally, networks tend to develop between people who share similar conceptions of teaching and learning, which may lead to an inherent bias in what is discussed (Poole et al., 2019). Furthermore, not all conversations lead to learning (Roxå & Mårtensson, 2009) and not all academics engage in them (Thomson & Trigwell, 2018). To distinguish between conversations which serve the purpose of learning and just everyday talk, Peter Senge (1990) coined the term "learningful conversation". He explained that learningful conversations "balance inquiry and advocacy, where people expose their own thinking effectively and make that thinking open to the influence of others" (Senge, 1990, p. 9). He considered reflection to be the key component of learningful conversations, as it helps to expose one's mental models, which are based on assumptions that influence how one sees the world and the actions one takes.

This doctoral dissertation explored the interplay between a formal pedagogical course and PhD students' informal conversations which supported learning about teaching in the higher education context. Accordingly, the following research question was formulated: How does the formal pedagogical course support the informal conversations that facilitate learning about teaching from the PhD students' perspective? This question was addressed in article 1.

2.3.3. Learning about teaching in an academic community

Academic communities in universities also offer opportunities for learning about teaching. The next sub-chapter gives an overview of the role of communities in learning about teaching through socialisation and acceptance.

Learning is a social process that is situated in contexts (Lave & Wenger, 1998), therefore considering the context of belonging to networks and building relationships with members of their academic community are crucial for PhD students to learn about teaching. Success in a given context is related to fitting into and learning to cope in the specific setting (Lave & Wenger, 1998). Socialisation that occurs in the early stages of the academic career aims to fully engage newcomers

in the academic community and to encourage their acceptance by its members (Baker, 2020). Socialisation is “the processes through which [a person] develops [a sense of] professional self, with its characteristic values, attitudes, knowledge, and skills (...) which govern [their] behavior in a wide variety of professional (and extraprofessional) situations” (Merton et al., 1957, p. 287). Gardner and colleagues (2012) claim that academic faculty are key influencers in the socialisation process, and that the absence of their support and guidance is detrimental to the career prospects of PhD students. Lave and Wenger (1998) argue that initially newcomers are at the periphery of the community and then move towards becoming established members.

There are several theoretical perspectives that highlight socialisation as a key aspect for newcomers. For example, Weidman et al. (2001) in their model of socialisation in higher education consider socialisation to be a subconscious process during which rules and norms of a particular culture are adopted, professional identity is forged and commitment to the professional field is developed. Ultimately, learning about teaching as one aspect of the academic role in the university, should lead, through socialisation, to acceptance by and integration into the university community. To manage and adapt to the new role, behavioural changes take place during the socialisation process (Bogler & Kremer-Hayon, 1999). While the earlier approach to socialisation viewed it as a unidirectional process where the newcomer had to learn and abide by the rules, a postmodern view of socialisation sees socialisation as affecting both the newcomer and the organisation (Tierney & Rhoads, 1993). Based on the human capital theory (Becker, 1975/1964), Weidman et al. (2001; 2020) claim that those socialised may choose to go against the established norms and not necessarily always conform to them.

A significant aspect of socialisation is agency. Agency is “the capacity of individuals to modify influences by reshaping social structures within normative contexts” (Weidman & DeAngelo, 2020, p. 311). The culture of an organisation is formed by members of the community and their relationships; hence newcomers have agency to change it (Rhoads & Tierney, 1992). Giddens’ (1991) structuration theory, on which Weidman et al. built their model, considered agency in organisations to be linked to power dimensions and claimed that power depends on relationships where individuals have relative autonomy. This means that they may or may not be able to exercise agency and bring about change (Giddens, 2004). Moreover, besides social relationships, agency is the result of “the interplay of individual’s capabilities and environmental conditions” (Priestley et al., 2015, p. 3). There are other factors that may influence obtaining or maintaining agency such as effort, resources, culture and structure (Leijen et al., 2020).

Socialisation that should lead to new academics’ acceptance of academic cultural norms and to their own acceptance by the academic community, is influenced by both general organisational and specific teaching-learning culture. Organisational culture “is more than the formal rules, codes, and regulations that direct members’ behaviors: culture is also the traditions, beliefs, and practices

passed on from one generation to the next” (Tierney & Rhoads, 1993, pp. 50–51). Organisations incorporate a set of cultures, not a single monolithic one (Martin & Siehl, 1983). For example, higher education institutions have a research culture as well as a teaching culture, which may compete in terms of value and recognition (Norton et al., 2010). A teaching and learning culture, or regime, as Trowler and Cooper (2002) put it, “is a constellation of rules, assumptions, practices and relationships related to teaching and learning issues in higher education” (Trowler & Cooper, 2002, p. 224). A teaching and learning culture is comprised of the “beliefs, values and behaviors a person or a group of people have with regards to their own teaching or learning in specific contexts” (Sagy et al., 2019, p. 850). In a teaching culture, it is also possible to distinguish between community members’ conceptions and approaches to teaching along a continuum of content- to learning-centred. Differences between these may result in tensions between community members.

Adapting to organisational culture is reportedly difficult for novice university teachers (Englund et al., 2018) and new academic teachers report experiencing a general lack of support when they start their work in academia, which contributes to their poor teaching. It seems to be assumed that they will blend in naturally and absorb the culture of the institutions organically (Jepsen et al., 2012). A lack of a supportive organisational culture (Englund et al., 2018) leads to limited contact with colleagues and a lack of meaningful conversations about teaching (O’Leary & Wood, 2019), as well as a limited number of trusted others with whom teachers can openly exchange ideas about teaching and learning (Van Waes et al., 2015). Yet having someone to talk to about teaching is of critical importance, just as discussions in research groups contribute to more critical and balanced outcomes. Van Waes and colleagues’ (2015) study revealed that the more successful university teachers attract a rather large and a diverse network of people which helps them to minimise personal bias and make scientifically sound decisions in their teaching, as well as to find innovative solutions for their teaching. Therefore, the importance of personal networks in enhancing professional development and teaching practice cannot be underestimated (Pataria et al., 2015). A study of PhD students’ socialisation conducted by Russell (2015) revealed that academic faculty members significantly influence the process, either by aiding and facilitating or by impeding it due to conflicts among influential members of the academic community. Unfortunately, the real dynamics in higher educational institutions indeed tend to be rather individualistic and connecting to people may not be easy (Barlow & Antoniou, 2007). This individualistic approach also feeds into the perception that teaching in a university is a solitary activity (Gizir & Simsek, 2005), which in turn leads to lack of exposure to good role models of effective teaching (Marsh & Hattie, 2002). Furthermore, besides a lack of collegial support, novice university teachers have been reported to experience a lack of administrator’s support (McCormack & Kennelly, 2011).

While the academic culture might tend to be individualistic, Selander et al. (2021) point out that learning is a social activity, and that academic communities may offer opportunities for it. One such community is the Community of Practice

(CoP) that is comprised of people belonging to a similar domain and united by a shared “concern or a passion for something they do and learn how to do it better as they interact regularly” (Wenger-Trayner et al., 2022, p. 11). CoP is a platform of mutual learning that may change the academic culture, work methods and identities of community members (Wenger-Trayner et al., 2022). To reduce isolation at the beginning of one’s academic career, participation in formal courses is also recommended; this facilitates becoming part of a community of practice and fosters discussions and reflection about teaching (Remmik et al., 2011).

This doctoral dissertation explored PhD students’ ways of experiencing acceptance of the norms, and their own acceptance by the university community. Accordingly, the following research questions were formulated (sub-questions of research question 2 – How does the experience of acceptance in an academic community shape learning about teaching from the PhD students’ perspective?): 1) what are the qualitatively different ways in which PhD students experience acceptance of the norms of teaching culture? 2) what are the qualitatively different ways in which PhD students experience acceptance by the teaching community? These questions were addressed in article 2.

2.3.4. Learning about teaching – individual transformative learning

Besides formal, informal and community-based learning, learning about teaching may need to include transformative learning to change content-centred conceptions and approach into learning-centred one. Today’s academics are expected to not only engage in research but to transform their teaching towards being learning-centred (Kaasila et al., 2021). However, previous research points out that this may not be an easy endeavour (Kember, 2009) and that not all learning efforts lead to transformative learning (Greenhill et al., 2018). The following sub-chapter will provide an overview of what transformative learning is and how it is fostered.

Transformative learning is defined as “the process by which we transform problematic frames of reference (mindsets, habits of mind, meaning perspectives) – sets of assumptions and expectations – to make them more inclusive, discriminating, open, reflective and emotionally able to change” (Mezirow, 2009, p. 92). A frame of reference is a way of knowing, it has an emotional, social and moral dimension and it is comprised of habits of mind and points of view (Kegan, 2009). Habits of mind are deep-seated patterns of thought, feeling and behaviour that are embedded in one’s assumptions and they form a set of beliefs expressed through points of view (Mezirow, 2009). It has been noted that openness to critical reflection does not necessarily lead to changes in behaviour (Bueddefeld & Van Winkle, 2018). Transformative learning, however, is characterised not only by openness to critical reflection and to transforming one’s frame of reference, but by subsequent deliberate actions, which may take place instantaneously or gradually (Mezirow & Associates, 2000). As one transforms, one may encounter various obstacles, such as situational, emotional, and informational challenges, and one may need to engage in additional learning experiences.

Transformative learning takes place in several ways and is distinctly different from other forms of learning. Transformative learning may be either epochal – happening as a result of life experiences or crises – or cumulative – happening sequentially over a period of time (Mezirow, 2009). A clear distinction is made between the “informative” and “transformational” kind of learning: the former expands the existing frame of mind (*what* we know) and the latter reconstructs the frame (*how* we know) (Kegan, 2009). In order for learning to be truly transformative, it is not sufficient to change merely how much or what is known, or to change one’s behaviour; an element of epistemological change is required (Kegan, 2009). Transformative learning may take place as a result of objective or subjective reframing: “objective reframing involves critical reflection on the assumptions of others, (...) subjective reframing involves critical self-reflection of one’s own assumptions” (Mezirow & Associates, 2000, p. 2).

In the theory of transformative learning eleven possible phases (Mezirow 1994, 2009) are described, as follows:

- “a disorienting dilemma;
- self-examination with feelings of fear, anger, guilt or shame;
- a critical assessment of assumptions;
- recognition that one’s discontent and the process of transformation are shared;
- exploration of options for new roles, relationships and action;
- planning a course of action;
- acquiring knowledge and skills for implementing one’s plans;
- provisional trying of new roles” (Mezirow, 1994, p. 94);
- “renegotiating relationships and negotiating new relationships” (Mezirow, 1994, p. 224);
- “building competence and self-confidence in new roles and relationships;
- a reintegration into one’s life on the basis of conditions dictated by one’s new perspective” (Mezirow, 2009, p. 94).

It is important to emphasise that progression through all phases is neither necessary nor linear (Mezirow, 1991). Transformative learning is a highly individual journey. It may take place in many different ways, and it is shaped by the context (Cranton, 2016).

While openness to critical reflection is necessary for transformative learning, it will not necessarily lead to changes in behaviour (Bueddefeld & Van Winkle, 2018). According to Mezirow (2000), it is essential to make a conscious decision to take action even after undergoing a transformative shift in one’s thinking perspective. This action can be either immediate or postponed, and it may arise from careful deliberation, or from a habitual behavioural pattern. As one transforms, one may encounter various obstacles, such as situational, emotional, and informational challenges, and there may be a need to engage in additional learning

experiences. This is perhaps why transformative learning is a complex and complicated process and not as straightforward as informative learning.

To transform one's teaching conceptions and approach from content- to learning-centred, pedagogical courses are recommended (Greer et al., 2016; Postareff & Lindblom-Ylänne, 2008). However, varying results in terms of their effectiveness have been reported, with some studies claiming that these are highly effective in impacting conceptions of teaching and learning (Gibbs & Coffey, 2004), while others demonstrate more moderate results (McChesney & Aldridge, 2021). What is also known is that formal learning does not transform the conceptions of all students (Greenhill et al., 2018). Furthermore, there are several factors which may influence whether and how learning from pedagogical courses reaches classroom practice, such as time, collegial support, rewards (Ginns et al., 2010) and the "disposition of the learner" (Eraut, 2004). Taylor (2000) posits that some people tend to have a greater tendency towards reflective thinking than others. Those who have an inclination towards reflective thinking may be more open to transformative learning.

Two further elements play an important role in the transformative learning process: context (Mezirow & Associates, 2000) and critical reflection (Snyder, 2008). Contextual factors such as customs, written and unwritten rules, and practices shape transformations (Roxå & Mårtensson, 2015). Both literal and cognitive contexts are significant as they affect life experiences from which meaning perspectives are formed and later evaluated (Mezirow & Associates, 2000). Context may influence individuals, perhaps even more deeply than Mezirow, developing the theory, realised during his lifetime (Taylor & Cranton, 2012). Critical reflection, on the other hand, may increase self-awareness about one's subjective meaning perspectives (Snyder, 2008), allow critical evaluation of assumptions and allow the exploration of collective experiences (Mezirow, 1998). Biggs and Tang (2011) link critical reflection to effective outcomes-based teaching. They maintain that theory enables the mere statement of *what-is* (just reflection) to transform into *what-might-be* (critical reflection); theory is seen as a way to illuminate and resolve problems in teaching. While university teachers may have implicit theories of teaching, they often lack an explicit teaching theory that could help them resolve their teaching dilemmas. An explicit theory could guide them to reflect critically on elements of their teaching, beyond simply finding faults with learners (Biggs & Tang, 2011).

Empirical studies regarding transformative learning have been conducted in various fields. For example, in education (Gawlicz, 2022), sustainability (Gal & Gan, 2020) and medicine (Greenhill et al., 2018) among others. The results of Greenhill and colleagues' (2018) study indicated that not all medical students experienced transformative learning. However, those who did were characterised by their initiative to find challenging learning opportunities and focused on consciously fostering collaborative relationships with both peers and teachers. These students had a clear vision of what kind of doctor they wanted to be, consistent with their values and clinical practice. The students who experienced transformative learning were aware of the shift in their perspective. The authors

also emphasised that the learning context is significant in facilitating the trajectory of transformative learning (Greenhill et al., 2018).

Fetherston and Kelly (2007) concluded in their study that creating a context conducive to transformative learning is difficult, as is achieving a depth of transformation in learners' thinking. The study found that students' experiences of transformative learning were described in terms of the transformation of attitudes, flexibility, increased awareness of self and others, and openness to other perspectives (Fetherston & Kelly, 2007). In her 2004 article, Berger described the journey of transformative learning, focusing on the threshold of transformation. The results of her study indicated that the experience of being on the verge of transformation varies. There are those who find the process painful and wish to return to their safe zone and there are those who seek out and revel in the transformation (Berger, 2004). From previous studies, it can be concluded that transformative learning from the students' perspective is a multifaceted, highly individual and complex journey that is shaped by the characteristics of the learners and by their respective context.

This doctoral dissertation explored how PhD students described the transformation in their teaching conceptions and approach towards learning-centredness, as well as the context surrounding this transformation. Consequently, the following questions were formulated (sub-questions of research question 3 – How does the process of transformative learning and its context shape learning about teaching and the transformation of conceptions and approach towards learning-centredness from the PhD students' perspective?) 1. How did participants describe the change in conceptualising their teaching/ approaches to teaching? 2. How did participants describe the transformation toward learning-centredness? 3. According to participants in the study, how did their teaching-learning environment enable them to implement their transformed teaching concept/approach? These research questions are addressed in Article III.

2.4. Summary of the Theoretical Framework

To summarise, the definition of learning is a complex and contested concept. Illeris (2002; 2007) proposed three dimensions of learning: content, social, and incentive. Selander et al. (2021) further developed these dimensions by highlighting the importance of the cultural, social and emotional processes in learning. This dissertation aligns with the constructivist perspective of learning, arguing that individuals construct their knowledge and understanding. The term “learning-centeredness” is a key concept in the thesis, used for consistency purposes to encompass “learner-centeredness” or “student-centeredness”. It emphasises active student participation, interaction, adapting to learners' needs, autonomy, power sharing, and the development of real-life and higher-order skills. University teachers' learning about teaching is contextualized by a historical perspective, illustrating the evolving priorities in university teacher professional development.

There has been a shift towards valuing teaching alongside research, but challenges remain in associating teaching quality with career progression.

Four ways of learning about teaching were presented. Firstly, formal pedagogical courses may be useful in learning about teaching, developing conceptions of and approach to teaching towards becoming more learning-centred. Some studies suggest that formal pedagogical courses can influence conceptions of teaching, while others question their relevance and their impact on student learning. The duration of pedagogical courses may affect their effectiveness; however, the results of studies on this issue have been mixed. Transforming teaching conceptions and approach into learning-centred ones is crucial for enhancing student learning, but how this transformation occurs has not yet been definitively established.

Results of earlier studies indicate that both formal and informal learning may provide opportunities to learn about teaching and that these are complementary ways of learning. Informal learning, in the form of conversations, may assist with resolving urgent issues in teaching. Pedagogical experts as conversations partners may develop one's pedagogical thinking and contribute to one's development as an academic teacher. However, the effectiveness of informal conversations for the purpose of learning about teaching depends on the quality of conversations and on the depth of reflection.

Another way of learning about teaching is by involvement in a community. Previous research indicates that PhD students struggle at the start of their academic career due to lack of support. It is necessary for PhD students to be part of academic networks for effective socialisation, for acceptance by the university community and to learn about teaching in the academic community. Socialisation is a process that leads to acceptance of the norms of the community and culture and fosters professional identity building. As newcomers have agency, they have the potential to reshape the culture and the norms within a community. However, if, how and with what results they exercise agency may depend on various factors. Newcomers may accept the norms of the respective culture readily or reject them completely. This may lead to different outcomes for both for the newcomer, the culture and the community. Relations within the community are crucial for newcomers and lead to their acceptance (or rejection) by the community; this also affects their opportunities to learn about teaching. Additionally, different cultures within an organisation may create difficulties for newcomers to navigate. For example, in an academic culture, research may be considered to be more important than teaching. In the teaching culture, there may be a distinction between content- and learning-centredness. Communities of practice offer learning opportunities and help to combat the isolation of early career academics.

Lastly, learning about teaching might need not only informational but also transformative learning to become learning-centred. Transformative learning is complex, involving the reframing of assumptions and expectations to become more inclusive, reflective, and adaptable; not all learning endeavours necessarily lead to transformative learning. Pedagogical courses are often recommended to facilitate this shift, but according to studies, their effectiveness varies. Context,

critical reflection and willingness to act also play a crucial role in transformative learning. Empirical studies have shown that transformative learning happens for some learners and to a lesser degree, or not at all, for others. The studies highlight the importance of considering the learning context, critical reflections and the learners' proactive approach for fostering transformative learning.

A common thread uniting the theoretical perspectives of different ways of learning about teaching is **reflection**. Informal conversations as a form of informal learning serve their purpose if they do not remain superficial but become "learningful" through reflection (Senge, 1990). This requires one's thinking and conversations to be "open to the influence of others" (Senge, 1990, p. 9). This is similar to Mezirow's transformative learning theory (1998; 2000) where critical reflection on one's assumptions and consideration of collective experiences may lead to more balanced outcomes and increased awareness. As communities offer a collective perspective, reflecting about teaching in a community may offer innovative solutions, and change the culture, methods of work and identities of people (Wenger-Trayner et al., 2022). As not everyone experiences transformative learning, it may depend on the characteristics of the learner (Eraut, 2004), such as having an inclination for reflective thinking (Taylor, 2000). Formal learning may provide opportunities for reflection about one's teaching conceptions and practice since gaining a theoretical perspective may facilitate critical reflection.

Another commonality is the consideration of **context**. In conversations as an avenue for informal learning, the context may be the workplace or the personal sphere where something is learned about teaching. However, not all contexts are conducive to conversations about teaching as networks and relationships may be formed with people with similar conceptions and thus lead to biased views and personal theories instead of scientifically grounded ones (Poole et al., 2019). The same applies to the process of socialisation and learning in a community. The context of the community may be such that obtaining agency for newcomers is either easy or difficult. Learning about teaching in a particular context may depend on the cultural norms, attitudes and established rules of the community. Context has an influence on life experiences and may shape the transformative learning trajectory (Mezirow & Associates, 2000). Critical reflection should aid the analysis of subjective meaning perspectives in a given context and expand these perspectives.

3. RESEARCH METHODOLOGY

The following chapter presents an overview of the research design, method, selection of participants, details of data collection and analysis, trustworthiness, ethical considerations, researcher's role and potential for bias.

3.1. Research design

Research is guided by a research paradigm, or world view, that explains how knowledge is sought and used (Thomas, 2016). The worldview guiding this research was interpretivism, also known as constructivism (Crotty, 1998; Mack, 2010). The constructivist paradigm maintains that knowledge is personally constructed (Phillips, 1995). The underlying assumptions consist of several elements: ontology (the view of reality), epistemology (acquisition of knowledge), axiology (underlying values), and methodology (how research is done, including methods, or what is done, employed in the process of research) (Creswell, 2003). The ontological assumptions of this research consider reality to be subjective as people mentally construct individual interpretations of events and they assign their own meaning to the experience (Mack, 2010). Mack (2010) explains that epistemological assumptions of interpretivism are based on the notion of gaining knowledge through personal experience, that knowledge is acquired inductively, and that it becomes noticeable in particular situations. The methodology based on these assumptions is explanatory, involving dialogic techniques and the exploration of several knowers, their sense- and meaning-making. The axiology of the constructivist research accepts the assumption that the values of the researcher, the research participants and the context need to be transparent (Lincoln & Guba, 2013).

A constructivist approach was employed in this dissertation by accepting that the reality reported by PhD students participating in the study is subjective, and that it involves different interpretations of how and what is learnt about teaching in the higher education context. Gaining knowledge about teaching through personal experiences was illustrated by participants' descriptions of situations involving conversations about teaching, their experiences of acceptance by the university community and their own acceptance of the university culture norms, as well as the transformation of their conceptions and approach towards learning-centredness. The methodology choices were grounded on an exploration of 25 PhD students' experiences and data was gathered via an interview format. Descriptions of the research context were provided above. The values of the researcher will be provided in the subsequent section. The values of the participants are visible in illustrative excerpts from their interviews presented in the original publications that form the basis of this dissertation.

Based on the described assumption of interpretivism as a research paradigm, this study focused on understanding PhD students' lived experiences of learning

about teaching in the higher education context. Semi-structured individual interviews and a variety of methods were employed (including inductive thematic analysis, phenomenography and case study), allowing the exploration of the different aspects which shape PhD students' learning about teaching.

3.2. Research method

Based on the research problem and the aim of the doctoral thesis, the methodology chosen for the studies which form the basis of the dissertation was qualitative. A qualitative method was considered appropriate as it provides new insights and understandings about individuals (Saldaña, 2011). It was also considered appropriate for an exploration and in-depth understanding of PhD students' learning about teaching in higher education.

While quantitative research aims to count occurrences, explore numeric patterns and find statistical relationships among the data (Creswell, 2003), qualitative research focuses on gaining insight into phenomena considering the context (Bradley et al., 2007). Qualitative research allows the exploration of the human experience in more depth than quantitative approaches (Pilarska, 2021). In qualitative research, the underlying assumption is that reality is a comprehensive, constantly changing, subjective and multifaceted phenomenon (Merriam & Tisdell, 2015). In contrast, quantitative research is rooted in (post-)positivism, with the underlying assumption that researchers must employ rigorous methods to be objective and eradicate potential biases, all in the pursuit of revealing an objective reality that exists independently (Hasan, 2016; Timans et al., 2019). A qualitative approach was selected because it accepted the assumption that PhD students' reality concerning learning about teaching in the higher education context is subjective and it is therefore not possible to reveal an objective reality. Hence, to gain a deeper understanding of PhD students' experiences of learning about teaching in this specific context, and to uncover new aspects of how PhD students learn about teaching, a qualitative approach was considered appropriate.

Selection of the qualitative method was due to its better fit for the research questions compared to a quantitative one. All of the research questions (How does the formal pedagogical course support the informal conversations that facilitate learning about teaching from the PhD students' perspective? How does the experience of acceptance in an academic community shape learning about teaching from the PhD students' perspective? How does the process of transformative learning and its context shape learning about teaching and the transformation of conceptions and approach towards learning-centredness from the PhD students' perspective?) call for an exploration of unique experiences and for an understanding of participants' experiences rather than for an aggregate statistic. Choosing three different methods to investigate PhD students' learning about teaching provided a deeper and more thorough understanding.

3.3. Selection of participants

The participants of the study were 25 doctoral students from four Estonian universities. The participants in the study were chosen from a list of students who had completed the pedagogical course at University of Tartu six months prior to the interviews and who had indicated in their learning diary that they could be contacted after the course for research purposes. Participants were contacted via e-mail by the supervisor of the dissertation Associate Professor Mari Karm and invited to participate in the research, and interview details were agreed with her.

A purposeful sampling method was employed which was considered appropriate for qualitative studies (Marton, 1986). For all studies that form the basis of the dissertation, the criteria for selection were status as a PhD student at an Estonian university and teaching experience in higher education after the completion of the pedagogical course. Completion of a pedagogical course as a selection criterion was considered relevant as the focus of the first article was on the interplay of formal and informal learning about teaching, hence this could be explored only with participants who had undergone formal pedagogical training. Furthermore, the completion of the pedagogical course was relevant in terms of shaping the experience of being accepted by the academic community and of accepting their norms, which was explored in the second article. Additionally, Mezirow's theory of transformative learning describes as one of the possible phases of transformation "critical assessment of assumption and acquiring knowledge and skills for implementing one's plans" (Mezirow, 1994, p. 94), which could ensue from completion of a pedagogical course and subsequent teaching experience.

The main criterion for selecting participants to be included in the case study for the third article was the presence of elements indicating a focus on learning-centredness in participants' self-descriptions of their teaching, either in the interview or in the learning portfolio. A secondary criterion involved evidence in participants' reports of a transformation in their conceptions of and approach to teaching, such as statements like "my teaching before and after the pedagogical course is like night and day," or indications of a process of transformation, such as "I think it needs more imagination how to implement those [learning-centred] things." The study investigated how participants' teaching conceptions and approach transformed towards learner-centeredness. Of the 25 interviews, four cases were chosen that best described the journey of transformative learning and also showcased varying degrees of transformation towards a learning-centred approach, whether during or after the pedagogical course. "Complete transformation" was defined as "an epistemological change rather than merely a change in behavioural repertoire or an increase in the quantity or fund of knowledge" (Kegan, 2009, p. 41). To gauge the extent or depth of this transformation, participants' self-reports of their knowledge and the application of the fundamental principles of the learner-centred approach were taken as indicators. Two cases were selected where transformative learning had taken place to the fullest extent, one case where there seemed to be incomplete elements of transformation and one

divergent case was chosen where the transformation appeared to be at a very early stage. Data from participants whose descriptions lacked the element of transformative learning were excluded from further analysis.

There were 16 female and nine male participants. Six participants were from the field of medicine, nine from social sciences, five from humanities and five from natural sciences. The length of participants' teaching experience in higher education ranged from one to seven years. Participants were chosen to allow variability of their experiences considering their demographic data, their role and length of experience.

3.4. Data collection

Data collection occurred from 2017 to 2020. The reason for such a long data collection period was to achieve maximum variation in the participants' experiences, to explore the uniqueness and diversity of the participants' experiences and to identify patterns that could be identified across those variations (Palinkas, et al., 2013).

In compiling the interview questions, both direct and indirect questions were included. The inclusion of both types of questions was to minimise any social desirability bias; i.e. any mismatch between what participants consider to be socially acceptable to present about themselves and their context, and what they genuinely perceive their reality to be (Bergen & Labonté, 2020). Indirect questions included, for example, questions asking participants to describe their teaching and their conversations about teaching. These descriptions were aimed at exemplifying how the participant thought about teaching, their teaching approach and conceptions, as well as learning from conversations about teaching without the need to present a socially acceptable answer about what they might have considered "right" or agreeable to the interviewers. Direct questions included, for example, whether there was anything from the pedagogical course that inspired the participant to try something new in their teaching. These questions were deemed to be less susceptible to social desirability bias. The interview guide is presented in Annex 1.

After the initial interview questions were drafted, the questions were discussed with colleagues from the ERASMUS+ project. Next, the pilot interview was conducted by the author's supervisor, Associate Professor Mari Karm. The pilot interview provided the opportunity to gauge the extent to which the interview questions yielded information about the research questions. A participant who was a doctoral student at the time of the interview and had completed the pedagogical course was chosen for the pilot interview and the data collected was used in the data analysis. Minor changes were made to the interview guide after the pilot interview.

Individual semi-structured interviews (Kvale, 1996) were used for collecting data. The interview format as the main method of data collection method was considered appropriate as it allowed the gathering of information about an indi-

vidual's "perspectives, feelings, opinions, values, attitudes, and beliefs about their personal experiences and social world, in addition to factual information about their lives" (Saldaña, 2011, p 32). Semi-structured interviews enabled the gathering of illuminating data and enabled the interviews to be tailored to the individual responses of the participants while still staying focused on the research questions. Although the interview protocol was followed, and three blocks of questions were covered during each interview, the sequence of questions was sometimes altered to follow the natural course of the conversation.

All participants were interviewed by two researchers (the author of the dissertation and supervisor Mari Karm). This was done to engage participants through different interviewer personalities and their meaning perspectives, as well as to follow interesting threads of thought brought up by the interviewees that might have been missed by a single researcher taking the lead role of conducting the interviews (Rosenblatt, 2012).

There are several limitations when two researchers conduct interviews together. One of the risks associated with multiple interviewers arises from their interaction with each other. Having a colleague present may create pressure for the researcher; however, trust and openness between colleagues mitigates this pressure (Bechhofer et al., 1984) as was the case with the researchers involved in the interview process of the current doctoral dissertation. Having two researchers interview one participant may be perceived as intimidating and may create a power imbalance (Bechhofer et al., 1984), so the well-being of participants was carefully considered by the researchers before and during the interviews. On the other hand, as the focus is directly on the participant and the content discussed, having two researchers do the interview may be considered an advantage (Redman-MacLaren, et al., 2014). It was noted that the interviewing atmosphere was enhanced and a better connection to interviewees was established with the participation of two researchers similarly to previous research conducted by Velardo & Elliott (2021). Interviewers made efforts to shift the power dynamic and empower participants by empathising with their experiences and sharing their own stories on the topic as suggested by Velardo & Elliott (2021). Additionally, as one of the interviewers was a teacher of the Estonian language pedagogical course that some participants of the study had completed (others completed the course in English with another teacher), any possible bias relating to questions about participation in a formal pedagogical course was mitigated by these questions being asked or clarified by the author of the dissertation, who was not a teacher of the course.

At the beginning of each interview, participants were given a short overview of the study, an outline of the main topics to be covered during the interview and assurance of research ethics considerations (maintenance of participant's confidentiality). Data collection ceased after 25 interviews. According to Merriam & Tisdell (2015), the saturation point can be decided upon with a discussion and an agreement between the researchers collecting the data. After 25 interviews, the discussions led to the conclusion that no new information was being obtained

from participants and that the emerging findings seemed saturated, so the decision was made to stop data collection.

The interviews ranged from 30 to 120 minutes and were conducted either face-to-face (n=19) in a place of the participant's choosing, or online, via Skype (n=6). After each interview, researchers discussed it and wrote up their reflections in the research journal. All the interviews were conducted in the Estonian language and were recorded and transcribed verbatim. Additionally, for article III, learning portfolios were used as a data source. The portfolios comprised an essay on learning and teaching, a learning log and reflective texts created during the pedagogical course. The length of portfolios was of up to two A4 pages.

3.5. Data analysis

The following subchapter provides an overview of the data analysis. Firstly, the preparation of data analysis is presented, followed by a description of the data analysis process.

Preparation of data analysis. All the interviews were audio recorded with the participants' permission and were transcribed verbatim (with the exception of filler words). The automatic transcripts (Alumäe et al., 2018) were re-read and mistakes corrected manually by the author of the dissertation. Interview transcripts were uploaded in QCamap software for further analysis.

To capture how PhD students learn about teaching, this qualitative study used three research designs: qualitative inductive thematic analysis, phenomenography and a comparative case study. An overview of the research aim, methods, and the focus of the three articles is provided in Table 2.

Following the research questions, the data in **the first article** was analysed employing the **qualitative inductive thematic analysis** method within a constructivist epistemology. Inductive analysis was deemed the most suitable as it helps to approach the gathered data without the need to fit it into a pre-existing model or framework and allows the identification of important themes from a data set (Braun & Clarke, 2006). The inductive approach was also selected because the identified themes have a strong connection to the data collected, even if they are not directly related to the concrete questions asked during the interview (Patton, 1990). It was also deemed appropriate as there was an interest in rich descriptions provided by participants without the need to fit them into a theoretical framework or a preexisting coding frame (Braun & Clarke, 2006).

For the **second article**, **phenomenography** was selected as the methodology because there was a phenomenon of experience of acceptance of the university teaching culture norms and of PhD students' own acceptance by the university community at its core. Phenomenography was chosen because it focuses, as an object of study, on "the qualitatively different ways in which people experience or think about various phenomena in the world" (Marton, 1986, p. 31). Phenomenography focuses on the variation in people's experiences and understanding of the phenomenon (Marton, 1980). It was also chosen because a phenomenographic

research design is suitable for finding out how individuals think, how their thinking develops and how teaching changes thinking (Gall, et al., 2007). As the second article investigated variation in PhD students' experience of learning about teaching in an academic community in a higher education context through socialisation and acceptance, and the phenomenon under study was acceptance, the phenomenographic approach was deemed suitable. Phenomenography as a methodology allowed the investigation of variation in PhD students' experiences of the phenomenon and of the underlying relationships between these experiences.

In the **third article**, a qualitative comparative case study research design was selected to explore transformative learning and the shift towards learning-centredness. It was considered appropriate in order to gain the perspective of the participants, as the aim was to “‘get under the skin’ of a group or organization to find out what really happens – the informal reality which can only be perceived from the inside” (Gillham, 2000, p. 11). A case study design was selected because it allowed the exploration of the ways in which transformative learning towards learning-centredness occurs, from the point of view of PhD students. When analysing data, cases were initially selected based on their informativeness in terms of the phenomenon under study (Patton, 2002). From the 25 interviews conducted, four cases were selected for further analysis, based on participant's description of their own teaching and on evidence within these descriptions of changes in teaching which indicated that participants' conceptions and approach to teaching had been transformed. The data of participants whose descriptions of their learning experiences did not provide information on transformative learning was not further analysed.

Once the four individual cases, distinguishable by their varying degrees of transformative learning based on theoretical characteristics of transformative learning, were selected, a cross-case analysis was conducted to further explore changes in the conceptualisation of and approach to teaching. Generalisations were then made about changes towards learning-centredness. Two cases were chosen where transformative learning was complete, one where it was well underway, and one where the transformative learning was still in the early stages. This variety was necessary to gain a deeper understanding of each case individually, as well as a combined understanding of them. The decision about the completeness of transformation towards learning-centeredness in this study was based on the participants' descriptions of their knowledge and application of the core principles of the learning-centred approach and on reports by participants of “‘an epistemological change rather than merely a change in behavioural repertoire or an increase in the quantity or fund of knowledge” (Kegan, 2009, p. 41). Comparing both divergent and similar cases, it is possible to better understand the results of a single case, especially in terms of how, where and why things are the way they are (Miles & Huberman, 1994). By comparing different cases, it was possible to find out how, where and why PhD students' transformation towards learning-centredness either did or did not occur.

Table 2. Overview of the research aim, methods, and the focus of the three articles

	Article 1	Article 2	Article 3
Overall aim of the study	The overall aim of the study presented in this doctoral thesis is to find out PhD students' perspectives on how different ways of learning shape their own learning about teaching.		
Methodology	Qualitative research, interpretivist paradigm		
Research design	Thematic analysis	Phenomenography	Comparative multi-case
Data collection	25 individual semi-structured interviews with PhD students		
Focus of the article	To examine informal learning of PhD students about teaching in the form of conversations.	To explore learning in a community and the experience of acceptance by PhD students of the university teaching culture norms and of their own acceptance by the university community.	To develop an understanding of how PhD students describe the transformation toward learning-centredness and how their teaching-learning environment enables them to implement their transformed teaching conception / approach.
Title of published article	Soomere, T., & Karm, M. (2021). PhD students' conversations that lead to learning about teaching: the interplay of formal and informal learning. <i>International Journal for Academic Development</i> , 26(3). https://doi.org/10.1080/1360144X.2021.1951738	Soomere, T., Karm, M., & Roxå, T. (under submission). PhD Students' Acceptance of the University Teaching Community's Cultural Norms and by the Teaching Community: a Phenomenographic Study. <i>Journal of Further and Higher Education</i> .	Soomere, T., Karm, M. & Roxå, T. (2024). PhD Students' Transformative Change in Teaching: A Comparative Case Study. <i>Journal of Transformative Education</i> .

The process of data analysis. In the first article, **thematic analysis** was employed. The phases of thematic analysis which guided the data analysis process were as described by Brown and Clarke (2006): first, the transcripts were read several times, and initial ideas were recorded. Next, initial codes were generated by collecting data relevant to individual codes. The third phase involved looking for themes and collating codes. The themes were then reviewed, and a thematic map created. The fifth phase concentrated on naming the themes. Finally, extract examples were selected and analysed in relation to the research question and the literature, yielding a report of the analysis.

The analysis involved an iterative process, considering all the gathered data and the coded passages being analysed. The researchers involved in this study discussed coding and categorising decisions as well as the interpretation of results until a consensus was reached. To enhance the reliability of results, a research journal was used to reflect on the data analysis process.

In the second article, **phenomenography** was the methodology employed. Zoltowski and colleagues (2017) describe the data analysis in phenomenography as a process involving reading and re-reading of transcripts. Responses of the interviewees are firstly arranged into categories which describe their experience of the phenomenon, secondly, the alignment of the responses with each category is identified, next, categories are redefined and relationships between categories are described, followed by collaborative discussions and critiquing of both the categories and the interrelationships. The aim is to create categories of description which are representative of the ways in which the phenomenon is experienced by more than one person (Zoltowski, et al., 2017).

Åkerlind and colleagues (2005) argue that the analysis could either begin as soon as all transcripts are prepared for reading, or a subset of transcripts could be analysed before the whole. The approach the current study adopted was to read a preliminary set of transcripts by two researchers first and then to read the whole body of text generated by the data collection. Most of the data analysis was done by a single researcher which does not undermine the rigour of the research as “any outcome space is inevitably partial, with respect to the hypothetically complete range of ways of experiencing a phenomenon. [...] Thus, an individual researcher can, at the least, make a substantial contribution to our understanding of a phenomenon, even if team research might have taken that understanding further” (Åkerlind et al., 2005, p. 93).

The results of phenomenographic research create what is called the “outcome space”, which has three aspects. The first aspect is the category of description (Maron and Booth, 1997). “A description of the ‘outcome space’, that is, a picture (in either prose or graphic form or both) of the categories and their relation to each other. The second aspect is the detailed elaboration of the categories of description. The third aspect is the detailed analysis of the relationships among categories. In practice, most outcome spaces show some form of hierarchical relationships among categories” (Åkerlind et al., 2005, p. 95). The latter may not always be a linear hierarchy but a branching one (Åkerlind, 2005). A process of data analysis is depicted in Figure 2.

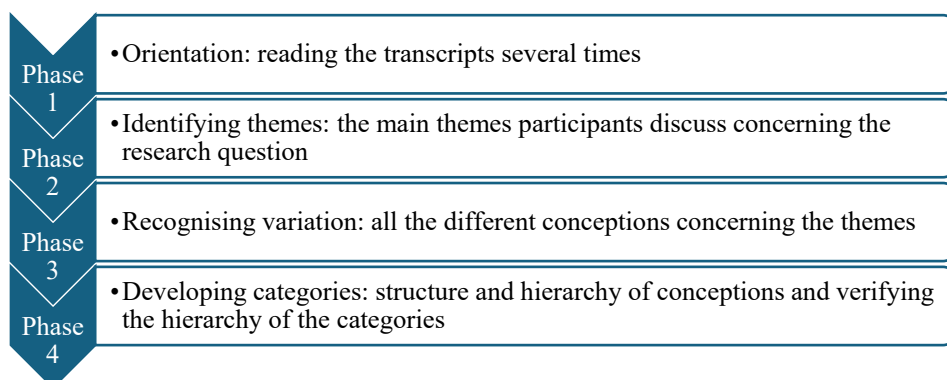


Figure 2. Process of phenomenographic data analysis (adapted from Jäppinen et al., 2015).

In the third article, a comparative multi case design was employed. Data analysis was conducted using content analysis which aims to provide a concentrated yet broad description of the phenomenon under study, the outcome of which is an analysis of categories of the phenomenon (Elo & Kyngäs, 2008). The inductive approach was selected due to the lack of knowledge about the phenomenon (Elo & Kyngäs, 2008). Data was analysed based on the stages described by Elo & Kyngäs (2008): preparation, organising and reporting. During the preparation phase, the interview transcripts and written reflections were read several times to make sense of the data as a whole, then units of meaning relating to the aim and the research questions were identified. The meaning units were related to reported changes in the conceptualisation of and approach to teaching. Only manifest content (i.e., what was actually said by the interviewee) was analysed. The organisation phase included open coding, category creation and abstraction. Open coding involved writing notes and headings during reading; headings were later collated into coding sheets. Initial categories were generated next. Categories were then clustered under higher order headings, based on the comparison and interpretation of data. Finally, the abstraction phase involved the generation, description and naming of sub- and main categories with explanations and examples. A cross-case analysis was then undertaken to explore transformation in the conceptions and approach to teaching. Through the investigation of multiple cases, the study aimed to identify how, where, and why a shift towards a learning-centred approach took place.

3.6. Trustworthiness of the study

The trustworthiness of a study indicates the extent to which a systematic process has been employed to report the findings and to interpret the data, and the extent to which the interpretations can therefore be relied upon (Lincoln & Guba, 2013). The four criteria of trustworthiness in qualitative research are **credibility**, **transferability**, **dependability** and **confirmability** (Lincoln & Guba, 1985; Morrow, 2005).

Credibility refers to establishing trust in the results and interpretations of a study. Qualitative research does not seek to discover “the truth” or report on the “objective reality”. Instead, it employs other means to enhance its credibility. Credibility in qualitative research can be achieved through extended engagement with the participants, triangulation (methods, sources, theories, researchers) and peer debriefing (Denzin, 1978).

Credibility in this doctoral dissertation was achieved through a prolonged period of data collection, from 2017 until 2020, which yielded rich data from participants of different backgrounds and experiences. In conducting the studies that form the basis of this dissertation, credibility was also increased by determining the most suitable research design and method of data collection, by developing and discussing the interview guide with experts (from the ERASMUS+ project and the supervisors of the thesis), and by selecting PhD students with varying degrees of teaching experience in higher education. In this dissertation, multiple methods (inductive thematic analysis, phenomenography, comparative case study) were used to enhance credibility. While interviews were the main data source for the dissertation, learning portfolios were also used as a data source for the third study. Two researchers were involved in data collection and analysis. In general, a pilot interview is considered essential to test interview questions for their suitability in terms of the responses they elicited from participants relating to the research questions (Gillham, 2005). In the current doctoral thesis, a pilot interview was conducted to enhance credibility. Additionally, peer debriefing was used after each interview. There were several theoretical perspectives (informal learning through conversations, learning in a community, socialisation, transformative learning) through which the findings were interpreted. Additionally, to enhance credibility, researcher beliefs and biases were reflected upon in the research diary at the beginning of the research process. By openly presenting the researcher’s own role and bias in the dissertation, transparency of research was enhanced, allowing the reader to see how a particular researcher’s “lens” may have influenced the findings and interpretations thereof (Maxwell, 2013).

Transferability relates to the applicability of findings and interpretations that is made possible through thick description including of the context. This allows the reader to determine whether results and interpretations are applicable and relevant to their own context. In the current dissertation, to facilitate transferability, a detailed description of the data analysis was included, as well as information about participants and the context. This can, according to Guba & Lincoln (1989), help the reader decide whether the results are transferable to their context.

Dependability refers to the process and whether or not it can be judged to be dependable and consistent (Lincoln & Guba, 1985). Dependability is achieved through an auditing process where consistency across the data, analysis, results and outcomes is critically reviewed. In the current dissertation, dependability was enhanced by employing a research diary (see Appendix 2 for excerpts), detailing how data was collected and analysed, how categories or hierarchies were created, and which questions emerged and were addressed during the process. In each study, examples of data analysis are provided in the respective articles.

Additionally, dependability was enhanced by a thorough descriptions of methods. Dependability can be increased by clearly indicating how the results and data are linked (Polit & Beck, 2004). In the dissertation, the process of analysis was described in detail. Furthermore, trustworthiness and reliability of findings and interpretations was enhanced by the provision of authentic citations. This allows the reader to ascertain that the presentation of results reflects participants' perceptions of the phenomenon under study and not that of the researcher (Guba & Lincoln, 1989). At the same time, it has been suggested that it is crucial to carefully check that participant's identity is not recognisable from the quotes used (Ford & Reutter, 1990). This was achieved by changing the pseudonyms for the participants in each article.

Confirmability refers to the dependability of the process of data gathering and analysis. This can be achieved by auditing, triangulation or reflective journaling (Lincoln & Guba, 1985). In this dissertation, two researchers were involved in the data collection for the studies that form the basis of this dissertation and which allowed rich data to be gathered from participants. In Article I, the author of the dissertation analysed the data together with one of the supervisors, Mari Karm. In Articles II and III, the author of the thesis was responsible for conducting the first round of data analysis, which was then discussed with both supervisors via online meetings to ensure that the data analysis met quality standards and that the results presented were justifiable. Throughout the research process, a research diary was kept to enhance confirmability. The data in the research diary is not presented in the dissertation as it was not analysed and was instead used as an analysis support technique. It served as a reduction of psychological tension, and a reflexion on the author's own biases and habits of thought in response to what was heard during data collection, and what was experienced whilst conducting the analysis and interpretation of the results (Beuving & De Vries, 2015). Diary entries served to make prejudices explicit, and to examine expectations towards the content of interviews (personal preferences of what one might or might not find in the data) (Gillham, 2005).

Finally, to enhance transferability, rich descriptions were provided and maximum variation sampling was employed. As Lincoln and Guba (1985) note, transferability of results rests more on the person trying to apply the results than on the original researcher, and the responsibility of the latter is to provide descriptions in sufficient detail. In this dissertation, rich descriptions of the context and of participants in the study have been provided to allow anyone seeking to apply the results in their particular context to make an informed decision. Additionally, detailed descriptions of findings, and evidence illustrated with quotations from participants have been presented. To further enhance transferability, maximum variation sampling has been employed in this dissertation. The diversity of participants may also allow more readers to find the results to be applicable to their own contexts (Merriam & Tisdell, 2015). While participants were all doctoral students from Estonian universities, they were selected to include different disciplinary backgrounds, genders, ages and lengths of teaching experience.

3.7. Ethical considerations

The European Code of Conduct for Research Integrity (ALLEA, 2017), which is the collection of overarching principles for research carried out in all scientific and scholarly fields, stipulates that ethical research is reliable, honest, respectful and accountable. This means that research quality is ensured from the point of view of design, methodology, analysis and resources. Ethical research is planned, carried out, reviewed, reported and communicated objectively, clearly and fully. It shows respect for different parties involved and impacted by research starting from fellow researchers, participants and the general public, through to the environment. There is accountability on the part of the researcher for the research process from planning to publication.

The Estonian Code of Conduct for Research Integrity (Centre for Ethics, 2017) outlines the responsibilities of ethical researchers. These are as follows: they treat participants in research with respect, they ensure the free will of participants in the research and they protect their privacy. Prior informed consent must be obtained from participants. The researcher must inform participants of the objectives, potential benefits and risks of the research. They must protect the personal data of participants.

From the initial idea to management and organisation, all the principles of research integrity listed above were adhered to in the studies that form the basis for this dissertation. An overview of how research ethics were observed is presented below.

Informed consent is considered one of the most important principles of research ethics. It is comprised of three components: adequate information, voluntariness and competence (European Commission, 2013). All participants were informed at the beginning of the interview about the purpose of the study. They were informed via the e-mail inviting them to the interview about the voluntariness of participation. All participants were competent to make a decision regarding participation in the study, and several of them asked follow-up questions clarifying the intent of the study and the publication timeline.

Pseudonyms were used instead of real names to protect the privacy of participants. Pseudonyms were assigned before the transcription phase to ensure confidentiality. All transcripts included only pseudonyms. A list of actual names and pseudonyms was generated by the author of the dissertation and kept on a removable memory card where it was only accessible to the author. Different pseudonyms were used in three articles to further avoid incidental exposition of participant identity.

Data protection. All gathered data was protected and kept on a removable memory card with access only by the author of the dissertation and the supervisor Mari Karm. Audio recordings and interview transcripts were accessible to the author of the dissertation and supervisor Mari Karm, and were kept on a removable memory card. As interview transcripts were uploaded to QCamaq, access to the data was safeguarded by using a computer that was password protected.

3.8. Researcher's role and bias

Sword (1999) states that all research endeavours inherently include biases and assumptions and reflect the personality of the researcher. Schwartz-Shea & Yanow (2013) claim that it is assumed that researchers in the interpretivist research tradition, which has been selected for the current dissertation, are able to recognise their own biases, possess self-awareness and can monitor and reflect on their own biases throughout the research process. The same authors maintain that to enhance the trustworthiness of research, interpretive researchers should carefully plan their research practices. The research process begins by positioning oneself as a researcher (based on scientific literature and earlier experience) and moves towards finding new knowledge that is inherently attached to the researcher's presence and engagement with participants of the study. The process is based on the assumption that it is impossible to "stay outside" the subject of inquiry (Schwartz-Shea & Yanow, 2013).

According to Schwartz-Shea and Yanow (2013), there are a number of concerns relating to the researcher's presence, bias and objectivity from the perspective of positive-informed methods. From the point of view of objectivity, a researcher undertaking a positivist inquiry needs to "stay outside", and to maintain distance from the subject of study both emotionally and physically. Researcher bias in the positivist approach can be minimised by detachment from the subjects of inquiry and by attempts to control "confirmation bias" (consciously searching for proof for a pre-existing belief) during data collection and the analysis phase. Overly close connection to participants or ideas may lead to a loss of the necessary distance. Additionally, researcher presence may affect participants and influence the outcomes of research.

Such positivist conceptualisations are somewhat problematic in qualitative research. Schwartz-Shea & Yanow (2013) maintain that creating artificial controls would prevent researchers from understanding participants and impede the latter from fully illuminating their understanding of the subject of the study. Additionally, a lack of physical presence with participants would render it impossible to gain an understanding of their experiences and perceptions (Schwartz-Shea & Yanow, 2013).

Studying participants with a familiar background and experiences, as is the case in the current dissertation, may provide an advantage for the researcher due to their in-depth understanding of participants' lived experiences; at the same time, there is a danger of projecting the researcher's own perceptions and ideas when interpreting the experiences of participants (Pillow, 2003). Asking questions and reflecting on both disparities and similarities between the researcher and the participants will raise awareness of how the different perspectives can influence the research process (Lietz, Langer, & Furman, 2006).

Reflexivity is seen as key to increasing the trustworthiness of qualitative research. It involves an analysis of the researcher's identity and its relation to the entire research process, from design to reporting results (Schwartz-Shea &

Yanow, 2013). In the following section, the researcher role and bias of the author of the dissertation are described from a first-person perspective.

I have been a doctoral student of Educational Sciences at the University of Tartu since 2018. I am a student who had taught for more than fifteen years prior to enrolling in the PhD program in higher and adult educational contexts and had gone through the same pedagogical training aimed at teaching in higher education as had all the participants in the study. As I was researching PhD students similar to myself, it was necessary for me to reflect on my role as a researcher and to keep my personal experience from influencing the research process. To minimise bias and to reflect on issues during different stages of the research process, I kept a researcher diary. In the diary, I reflected on my initial thoughts about my experience as a doctoral student, my role as a teacher and supervisor in higher education, my own teaching philosophy, and my expectations towards the study before the data collection started. This allowed me to bring to the surface any perceptions and attitudes that could potentially influence my role as a researcher. It also helped me when we were conducting interviews to phrase questions in a manner that was not leading or did not indicate my own preferences. During the later stages of research, I re-read my initial reflections and compared them to the results to see if I had interpreted data with personal bias.

In the research diary, I recorded my reflections after the interviews with my initial thoughts about the analysis. During the analysis phase, as the process took place over a period of time and was done several times, my notes about the analysis process helped me to notice any deviations from the research questions or possible biases. This reflection also helped me to differentiate my roles as a researcher and as a doctoral student.

To minimise bias, two of my supervisors were involved in creating the interview protocol, one of them (Mari Karm) conducted the interviews with me, we reflected together after each interview, and she also participated in the data analysis process. Potential issues and inter-coder disagreements were discussed in depth. At the same time, as Mari Karm was a teacher of the pedagogical course some participants had completed (the Estonian language one), we were aware that she was in a unique position because she had a close relationship with participants that could involuntarily transfer to data collection and interpretation (Matteson & Lincoln, 2009). We discussed this and I took the lead as the primary interviewer in the majority of interviews. At the same time, this unique relationship allowed her to ask additional questions and to delve deeper into the topics discussed.

While from the interpretivist perspective, it is impossible to eliminate all pre-conceived notions based on personal experiences and possible biases due to my role as a PhD student, at the same time, having this experience and background allowed me to interact with the participants on a deeper personal level and for them to potentially open up more. Excerpts from the researcher diary can be found in Appendix 2.

4. RESULTS

In the following section, an overview of the main findings addressed in the research questions is provided. The results are more thoroughly described in the journal articles I–III with illustrating excerpts from interviews.

4.1. PhD students' conversations that lead to learning about teaching: the interplay of formal and informal learning (Article I)

Article I aimed to answer the first research question of the dissertation and to find out how the formal pedagogical course supported informal conversations that facilitated learning about teaching from the PhD students' perspective in a higher education context. The results of the study are presented according to the main themes identified in the data.

According to the results, participants emphasised understanding the **significance of talking about teaching** as a result of completing the formal pedagogical course. Several participants mentioned that they had not talked about teaching with anyone prior to the course and it seemed quite alien to them at first. The value and usefulness of such conversations was reported to be a discovery for them during the pedagogical course. The diversity of conversation partners was highlighted by participants, as the course brought together peers from different fields and with different views about teaching, which were discussed during the course. Conversations with the academic developers, who were the course teachers, were also deemed significant by participants, as they were reported to have a wealth of both theoretical and practical knowledge about teaching. The diversity of the conversations on the topics of the pedagogical course allowed participants to gain knowledge about ideas and methods that they deemed most suitable for their own teaching context. Additionally, participants elaborated that they gained food for thought for conversations about teaching outside the context of the pedagogical course.

Another sub-theme that emerged was **reflection on teaching** in conversations. As the formal course included mini-lessons, participants of the study reported seeing fellow PhD students teach and hearing them reflect about their teaching. They also reflected on the course teachers not only talking about learning-centredness but employing it in their own teaching during the course and reflecting about their own journeys as teachers. The course teachers were reported to be role models for several participants. Observations of lessons and reflection about teaching facilitated the habit of reflection about teaching, according to participants.

The second main theme that emerged regarding how the formal course supported subsequent informal conversations was **sharing insights about teaching**. Pedagogical knowledge gained at the course was reported to be shared with

colleagues and other PhD students with whom teaching responsibilities were shared. These conversations involved the themes of teaching practice, approaches to teaching, and theoretical knowledge. Teaching practice related conversations were reported to include the topics of methods and assessment. Information about learning-centred teaching methods and personal experience with these were reported to be shared and it was discussed how they could be implemented in courses taught together. Assessment was discussed in terms of methods, criteria and frequency of testing, as well as summative and formative assessment. According to participants, these discussions aimed to link the theoretical knowledge gained at the pedagogical course with the reality of teaching practice, considering also the views and teaching experience of colleagues and peers. In these conversations, learning was realised by the process of testing ideas and finding the best solutions for each teaching context and for cooperation with students.

Theoretical pedagogical knowledge which had been gained and expanded on during the formal pedagogical course emerged in conversation as a sub-theme. As participants reported having gained theoretical knowledge about teaching, this transferred to their conversations. According to participants, gaining an understanding of learning theories, learning outcomes and constructive alignment was significant in terms of organising their own teaching systematically. Furthermore, these were discussed with individuals both within and outside the university. According to participants, what was learnt from these conversations was mostly related to joint teaching contexts and to ways in which the teaching practice could be changed in order to engage students more actively, to more closely align assessment with learning outcomes, or to use more formative assessment.

Another topic that was discussed was related to **approaches to teaching** (teaching strategy). Insights about vertical and horizontal links in the curriculum and common requirements were discussed to ensure cohesion and a holistic approach to education. These discussions, however, did not always result in positive changes; at times, these were reported to create tensions with colleagues.

Another sub-theme that emerged and that led to both positive and negative outcomes was **sharing insights about learning-centredness**. According to participants, experiencing the learning-centred approach during the pedagogical course allowed them to understand it more deeply and to reflect critically on their own teaching practice. Discussions about learning-centredness took place with individuals both within and outside the university. With peers and colleagues within the university, these conversations were reported to involve explanations of the essence of learning-centredness and the advocating of its advantages, which led to changes in syllabi and assessment. On the other hand, such activism was also met with disapproval where it did not seem to fit into the cultural norms of the respective institute or department. It was considered inappropriate both in terms of hierarchy (PhD student telling the more experienced colleagues how to teach) as well as in terms of the teaching approach (content-centred teaching was reported to be more prevalent in these contexts).

On the other hand, a theme of **missing conversations** emerged. There were participants who reported not talking to anyone about teaching. Some of them

mentioned that they did not feel the need to talk about their teaching. Others reflected about their teaching in a journal but did not identify a need for a conversational partner to discuss these ideas. A sub-category of missing conversations was that of **missing conversations about teaching with the supervisor**. While several participants mentioned that they would have liked to have had conversations about teaching with their supervisor, the theme of not having those discussions was prevalent. There were several reasons provided by participants for the lack of these conversations: the supervisor was not deemed to have effective teaching skills, the supervisor had a negative outlook towards teaching, the supervisor had a different approach to teaching than the participant him/herself, lack of time, limited communication generally with supervisor and, finally, the participant's perception of a lack of significant issues to discuss with the supervisor about teaching. What is noteworthy is that some participants reported that their supervisors sometimes asked for their advice about teaching. What was learnt from those conversations was that even experienced supervisors may lack pedagogical knowledge, and that the sharing of insights from the pedagogical course was appreciated by some supervisors.

Overall, according to the participants, the formal pedagogical course supported their informal conversations that lead to learning about teaching. The interplay of formal and informal learning in the form of conversations was, according to participants, most significant in gaining an understanding of the value of talking about teaching, sharing insights about the learning-centred approach and sharing theoretical pedagogical knowledge.

A more thorough description of the support of a formal pedagogical course on facilitating informal conversations and the interplay between those two forms of learning with respect to PhD students' learning about teaching is presented in Article I.

4.2. PhD students' acceptance of the university teaching community's cultural norms and their own acceptance by the teaching community: a phenomenographic study (Article II)

Article II aimed to answer the second research question of the dissertation and to develop an understanding of the variation among PhD students' lived experiences of accepting the university teaching community's cultural norms, and of being accepted themselves by their teaching community. The teaching community was mostly described at the departmental or institute level. The results of the study represented qualitatively different ways of experiencing acceptance.

The three ways of experiencing acceptance identified in the transcripts were:

- 1) Acceptance as equal partners (Category 1)
- 2) Acceptance as knocking against boundaries (Category 2)
- 3) Acceptance as being on the margins (Category 3)

Descriptions of experiences in the category of *acceptance as equal partners* (**Category 1**) revealed that PhD students in the study described accepting the norms of the university teaching community culture and having many positive relationships with members of the community, which afforded them full acceptance by the community. They described having ample opportunities for teaching, as well as the freedom to choose what and how to teach. Participants reported the teaching culture as being mostly learning-centred, teaching as being seen as something of value and had no issues adopting that approach themselves as it coincided to a large degree with their own. The experiences in this category were also described in terms of close contacts with members of the community, including professors, who were reported to share their ideas and to talk about teaching, and who were concerned about the quality of teaching in their respective department/institute.

Cooperation experiences in this category concerned a wide range of people, including students, supervisors and colleagues. Part of the experience of acceptance reported by participants in this category had to do with support provided to them and their active engagement in different activities, from curriculum and subject development to departmental discussions. Participants described the experience of acceptance in terms of being on an equal footing with others in the respective department or institute, and of exercising agency – not only having ideas about what and how to change regarding teaching, but also experiencing their recommendations being implemented.

The experiences of acceptance in this category were mostly described in positive tones. They included reports of engaging with the community, being treated as an equal, feeling embraced and trusted by the community, supervisors and students. This, in turn, led to opportunities for exercising agency and for bringing about change. These experiences also included descriptions of plentiful opportunities for teaching and of autonomy in the decision-making process regarding teaching.

Descriptions of experiences in **Category 2 – acceptance as knocking against boundaries** – were more diverse than were those described in Category 1. Whereas participants described accepting the norms of the university teaching community culture and experiencing acceptance by the community in generally positive terms, they also reported experiences of alienation, pushback, and conflict. The descriptions of experiences of acceptance in this category depicted participants' considerable freedom in teaching, but also reflected their difficulties in becoming full members of the community and of accepting the cultural norms. Whereas in Category 1 participants reported that the teaching culture was perceived to be mostly learning-centred, the descriptions in Category 2 tended to reveal perceptions of a more content-centred teaching culture. This was reported to contrast quite strongly with the approach favoured by participants themselves.

When the difference of approach was voiced and concerns about the content-centred approach raised, these were reported to create tensions and possibly led to frictions with colleagues. Participants also described that they perceived being only partially accepted by the community. The efforts to share ideas about the

learning-centred approach were described as resulting in both positive and negative outcomes. The positive aspects were related to colleagues' reactions of excitement at the newfound knowledge regarding teaching and of its employment in their teaching. The negative aspects were related to the perceived inflexibility of their colleagues' approach to teaching and their perceived unwillingness to change. This sometimes resulted in participants reporting feeling frustrated or overwhelmed, or even leaving the organisation.

Exercising agency was described as arduous and was perceived as *knocking against boundaries*. While sometimes it was difficult to bring about change, the experience of participants in this category revealed that having one foot outside the university in professional practice worked to their advantage and allowed closer collaboration with some groups within the university community. There were also some opportunities for experiencing acceptance through being engaged in curriculum and teaching development in their respective departments. At the same time, being able to voice concerns did not mean that their opinions were always considered. This was reported to result in feelings of frustration and disempowerment on the part of participants.

Overall, descriptions of acceptance in this category revealed struggles to accept the norms of the university teaching culture and struggles to be accepted, in turn, by the community. Participants reported experiencing acceptance by some members of the community and thereby found possibilities to exercise agency and to lead change in teaching. On the other hand, participants also reported a lack of acceptance by some members of the community and reported that opportunities for their agency to be exercised were reduced. PhD students in the study reported not accepting the perceived norms of the university teaching culture as these did not match their own. The experience of acceptance, as described by participants, was related to collaborating with students, colleagues and supervisors alike. While participants described being given relative freedom when it came to their own teaching, they reported having difficulty being accepted by the community or with accepting the norms of the teaching culture.

Descriptions in **Category 3 – acceptance as being on the margins** – revealed experiences of having little awareness and understanding of the norms of the university community culture and of being only minimally accepted by the community. As participants reported only having limited interaction with members of the university community, their descriptions of acceptance could be explained as feeling being on the margins of the community, or of being only superficially accepted. The norms of the culture were reported to be understood to a limited degree or there was a perceived obligation to accept them. The descriptions of acceptance of the norms indicated a lack of criticism of them. The feelings of frustration were often reported as not being expressed to the members of the community, neither were there descriptions of any rejection of the cultural norms or of open disagreements with members of the community.

Descriptions in Category 3 revealed limited opportunities for teaching as well as little freedom in decisions regarding teaching. This lack of autonomy was reported to be both positive and negative. It was positive in terms of being able

to rely on colleagues and supervisors and receive support. It was negative in terms of the perception of forced roles and duties, and the feeling of unfair treatment.

The experience of acceptance in this category, as described by participants, was mostly related to collaborating with students. Both the positive and the negative experiences with students tended to lack descriptions of critical reflection. As the descriptions of experiences in Category 3 revealed a lack of close relationships with the members of the community, there was a corresponding lack of reports of collegial conversations about teaching, which could have helped participants to make sense of their experiences with students and to learn from these.

The lack of opportunities to exercise agency also emerged from these descriptions of experiences. While participants did describe some conversations with colleagues, a prevalent feature of these conversations was resistance to the implementation of any proposed changes by participants. According to the participants, they did not have much say or influence on the teaching in their community or on the respective cultural norms.

Acceptance by the community was described as minimal and the descriptions were centred around physical and social isolation. Descriptions of acceptance were characterised by limited chances for social contacts with colleagues and a general detachment from the community. Some participants related this to their authorisation agreement (employment contract) which formed the basis for their connection to the university. Others described a lack of common physical spaces to interact with other community members. There were also descriptions of being in the same physical space as community members, but not being included in conversations about teaching.

Another result regarding PhD students' acceptance of the university teaching culture norms and regarding their own acceptance by the community was related to PhD supervisors. While there were some reports of good relationships with supervisors, they were rarely described as having assisted participants with making sense of the university teaching culture norms. Neither were they described as having facilitated relationships with community members or as having helped them to become a fully engaged member of the community.

Outcome space

In a phenomenographical study, the last step in the analysis is finding relationships between categories of description, which is called the "outcome space" (Marton & Booth, 1997). A hierarchical order representation was chosen to present the results of the study. Categories of description were organised from higher-order (the most sophisticated) to lower-order (the simplest) categories, representing the different ways of understanding and experiencing the phenomenon under study (Tight, 2016). The categories of description of acceptance can be hierarchically organised in accordance with two key aspects of the research questions: PhD students' acceptance of the norms of the university teaching culture and their own acceptance by the teaching community. The outcome space depicting these key aspects in ways of experiencing acceptance is demonstrated in Table 3.

Table 3. Outcome space: key aspects of variation in ways of experiencing acceptance.

Key themes	Categories		
	1	2	3
Acceptance of teaching culture norms	Full	Partial	Unawareness, acceptance without understanding
Autonomy in teaching	Full	Full	Minimal
Agency to change teaching	Curriculum, syllabus, lesson	Curriculum, syllabus, lesson	Lesson
Agency to change teaching culture norms	High	Medium	None
Collaboration in teaching	Superiors, colleagues, students	Superiors, colleagues, students	Students
Social interaction with community	Rich	Rich	Poor, few entry points
Acceptance by community	Full	Partial	Minimal

As can be seen from the outcome space depicted in Table 3, there is a connection between the descriptions of PhD students' acceptance of the norms of the university teaching culture and of their own acceptance by the community. Category 1 describes the most comprehensive experience of acceptance, characterised by full acceptance by the community and by being afforded the greatest degree of teaching autonomy. The descriptions of autonomy in teaching decrease in line with the decreased degree of acceptance by the community.

The three categories of descriptions can be characterised by the degree of PhD students' social interaction with community members and the degree to which the teaching culture norms were perceived to be learning-centred. Category 1 included descriptions of plentiful interactions and good relationships with the community, which was associated with the experience of full acceptance and full autonomy in teaching. Category 2 included descriptions of a lesser degree of interactions and more neutral relationships with community members as compared to Category 1. However, it included descriptions of full teaching autonomy. These descriptions revealed the exercise of some agency. Category 3 contained descriptions of an even lower degree of social interaction and of very limited autonomy in teaching compared to the other two categories. The relationships in this category were described as being superficial and the connections to the university as being loose; experiences of acceptance in this category were characterised by perceiving themselves as being on the margins of the community. The descriptions indicated a relative lack of familiarity with and trust of the community, which in turn, led to the limited agency described by participants.

A more thorough description of learning in the community, the qualitatively different ways in which PhD students experienced acceptance of the norms of the university teaching culture and of their own acceptance by the teaching community is presented in Article II.

4.3. PhD students' transformative change in teaching: a comparative case study (Article III)

Article III aimed to answer the third research question of the dissertation and to find out how does the process of transformative learning and its context shape learning about teaching and the transformation of conceptions and approach towards learning-centredness from the PhD students' perspective.

The results are presented firstly as individual cases and then according to the research questions, comparing the cases. Of the 25 interviews with PhD students, four cases were selected based on the descriptions of lived experiences of transformative learning towards learning-centredness and the depth of transformation reported by the participants. Two cases were chosen based on their descriptions of a full transformation, one case was selected based on the transformation being partially complete and one that was at an early stage.

Noah

Noah's background was in medical sciences. He reported having taught for a long time and the transformation towards learning-centredness in his case appeared to have started some time ago. He described feeling dissatisfied with his teaching at certain points during his career and he explained that he had attempted changes earlier based on his intuition. However, he reported that he was not quite able to delve deeper into the dissatisfaction or analyse it more systematically before completing the pedagogical course offered by the university. He expounded on the pedagogical course as being essential on his journey towards learning-centredness, providing him both with the means and ways to change his teaching from conceptions to approach.

After the pedagogical course, Noah described having difficulties in applying the learning-centred approach in practice. These impediments came from both students and supervisors. Some descriptions of encounters with students revealed their surface approach to learning, which was difficult for Noah to deal with and accept. Furthermore, his supervisor was indifferent to his ideas about transforming teaching to better prepare students for their future professional roles. Noah described being frustrated by the lack of interest by the supervisor and left the institution and his teaching position. However, leaving the institution did not mean abandoning the transformed conceptions and approach to teaching.

Robert

Robert's background was in social sciences. Similarly to Noah, Robert had also had a long experience of teaching. He also described minimal dissatisfaction with his teaching over the years but major dissatisfaction after completion of the pedagogical course at the university. He described both his conceptions and approach transforming towards learning-centredness during and after the course. However, one of the key factors in Robert's report about his transformative learning had to do with prior experiences that had accumulated over time. He reported having had conversations with his wife about learning-centredness. When reflecting about his experience of being coached, he noted that it shared some principles with learning-centredness. When he recounted his visit to a foreign university, he described noticing how successfully the learning-centred approach was employed there. The ideas seemed to sink in gradually and resonate during the pedagogical course when the learning-centred approach was introduced and experienced by him. After the pedagogical course, Robert described little difficulty in applying his transformed conceptions and approach. He reported his learning-centred ideas of teaching being welcomed by students, colleagues and supervisors alike.

Rasmus

Rasmus' s background was in social sciences. Compared to Noah and Robert, Rasmus had less, but still several years of teaching experience. Based on his description, the transformation towards learning-centredness seemed to have started during the pedagogical course. He reported having had some dissatisfaction with his teaching but was apprehensive about adopting a completely different approach in teaching, hence his transformative learning was still in progress. At the same time, he described a shift towards learning-centredness due to how he perceived his role as a teacher and his responsibility towards students as future colleagues. After the pedagogical course, Rasmus had mostly positive experiences in the teaching-learning environment regarding his transformation towards learning-centredness. He reported receiving support for the transformed approach from his supervisor, colleagues, and students. Rasmus described some minor issues with students' acceptance of his transformation towards learning-centredness.

Saskia

Saskia's background was in the humanities and the arts. Compared to the other three cases, Saskia had the shortest teaching experience – only a few years. Her descriptions revealed that she employed a learning-centred approach during the first years of teaching based on the guidance received from more experienced colleagues; however, when given sole responsibility for subjects, she described focusing more on the content, as well as on methods and strategies for managing

lessons. While Saskia described experiencing some dissatisfaction with her teaching, only minor changes were made. After completing the pedagogical course, she reported the intention of implementing what she had learnt but explained that she encountered difficulties finding ways to do it. She did not describe any major transformation of her teaching conceptions or approach towards learning-centredness either during or after the pedagogical course. Saskia did, however, reflect on the need to re-take the course after gaining more teaching experience. Her transformation towards learning-centredness seemed, based on her descriptions, to be at an early stage of the cumulative transformative process. Saskia's account of her teaching-learning environment was mostly positive and described as learning-centred. She described receiving teaching-related support from colleagues and encouragement to develop her teaching competence.

The results of the study answering the research question – **How do PhD students participating in the study describe the change in conceptualising their teaching/ approaches to teaching?** – indicate that there was a common category for all PhD students participating in the study, in terms of transforming their teaching conceptions and approach, and that was the application of the learning-centred approach to their own teaching. This involved a greater degree of active student involvement, for example encouraging peer discussions. In three cases, Noa's, Rasmus' and Robert's, transformation in teaching took place as a result of theoretical pedagogical knowledge acquired during the pedagogical course. Theoretical knowledge also raised participants' self-awareness about their students' learning process and prompted them to reconsider the student-teacher roles.

In two cases, the transformation towards learning-centredness involved difficulties. These were both internal, such as reconciling the traditional and the learning-centred approach in the case of Ramus, as well as external, such as resistance by the students to the learning-centred approach, in the case of Noah. In Robert's case, transformation was prompted by experiencing the learning-centred approach first hand. While on an abstract level, Robert reported having known about learning-centredness, it had apparently not yet registered on a deeper level.

The results of the research question – **How do PhD students participating in the study describe transformation toward learning-centredness?** – showed two common categories across three cases. The first theme was dissatisfaction with one's own teaching, which was described as something experienced both before and after the pedagogical course. Dissatisfaction was reported to be caused by the perception that students' needs might not be met, nor learning outcomes achieved. The second common theme regarding transformation towards learning-centeredness was a reflection on one's own teaching based on theoretical pedagogical knowledge. Prior experience that echoed the theoretical knowledge gained during the pedagogical course and time to reflect were the key aspects described by participants with respect to their transformation towards learning-centeredness. Rasmus described various life events and experiences that resonated with the pedagogical course and allowed him to piece together and accept the concept

of learning-centeredness. The theoretical knowledge allowed participants to analyse and reflect on their own teaching and to reconsider their previous ideas about teaching and teaching practice, although the depth and application of this varied across cases. In Saskia's case, she described minimal dissatisfaction with her teaching and a lack of transformation towards learning-centeredness which she attributed to her lack of teaching experience, although she did mention reflecting about her own teaching. In other cases, reflection led to concrete outcomes in teaching, such as reviewing the syllabus, engagement of the students, allowing more autonomy for the students in the learning process, and introducing formative assessment.

Two categories emerged as a result of the research question “**According to PhD students participating in the study, how does their teaching-learning environment enable them to implement their transformed teaching concept/approach?**”. The first indicated support for the transformed teaching conceptions and approach towards learning-centredness in the teaching-learning environment (in three cases – Saskia, Robert, Rasmus) and the second revealed a lack of support (in one case – Noah). When a supportive context was described, support was drawn from colleagues and supervisors. This was expressed through teaching-related conversations and through the participants' perception that a learning-centred approach was favoured; they were reassured about their ideas and plans for changing their teaching. In addition, Saskia and Rasmus described receiving encouragement from colleagues to take the pedagogical course. Furthermore, Saskia was invited to observe colleagues' lessons to see the learning-centred approach in practice and she also received feedback on her teaching. Robert reported that he considered it important that the head of the organisation was a proponent of the learning-centred approach thus fostering an organisational culture in support of it.

A lack of support for the transformed teaching approach in the teaching-learning environment was described in one case – Noah's. While he also had teaching-related conversations with his supervisor, these were described in less positive terms and ultimately led to his resignation from the position. After Noah left the position and started in a new workplace, he tried again and managed to employ his transformed learning-centred approach there.

A more detailed description of PhD students' descriptions of transformation in their teaching conceptions and approach, and the aspects that shaped the transformation is presented in Article III.

4.4. Summary of main findings

The following subchapter summarises the most significant findings of the studies that form the basis of this doctoral dissertation.

Research question one – **How does the formal pedagogical course support the informal conversations that facilitate learning about teaching from the PhD students’ perspective?** The results of the study demonstrated that, according to the participating PhD students, completion of a pedagogical course which emphasised the value of teaching and focused on the learning-centred approach was significant in supporting conversations that facilitated learning about teaching. One significant aspect of the pedagogical course was gaining an awareness of the importance of talking about teaching, which was not customary before the course for some participants. Another meaningful outcome of the course that shaped informal conversations was the opportunity to discuss teaching with various others, including fellow doctoral students from other fields, as well as the academic developers who facilitated the course. These diverse conversations presented participants with an opportunity to gain both theoretically grounded knowledge and practical ideas for their own teaching.

Learning about teaching from informal conversations was reported to be connected to reflection. As the pedagogical course involved teaching mini-lessons, participants reported witnessing their peers reflecting after their lessons about their own teaching. Additionally, the academic developers in their role as course teachers were also described to reflect on their own journey as teachers. They were reported to serve as role models for the PhD students because they were reported to not only speak about the theory of learning-centred teaching but also employed the approach in their own teaching, so that participants could experience it firsthand.

The second important result concerning the ways in which the formal pedagogical course supported the informal conversations that facilitated learning about teaching was that of sharing insights about teaching. The pedagogical course was reported to provide an abundance of knowledge about teaching, which many participants wanted to share after the completion of the course with fellow PhD students or with colleagues with whom they shared teaching responsibilities. The theoretical knowledge gained at the course was discussed with others to find the best solutions in teaching practice, taking into consideration their peers’ and colleagues’ practical experiences and the realities of individual teaching contexts. From these conversations, participants reported learning ways to enhance student engagement and to refine assessment practices. Not all conversations were reported to have positive outcomes, as some were described in terms of conflict with colleagues. This was reportedly most prevalent in cases where questions were raised by PhD students participating in the study concerning common requirements, curriculum structure and linkages between subjects. Another source of tension in conversations about teaching that had roots in the pedagogical course was advocating for the learning-centred approach. This was reported to be

most frowned upon in contexts where the university departmental culture was described by participants as being more content-centred.

There was, moreover, a theme of missing conversations. Some PhD students reported talking to nobody about teaching. This was due to a perceived lack of need for a conversational partner to talk about teaching or due to the perception that reflecting about teaching in a written form (a diary) was sufficient. A sub-theme of missing conversations was the lack of conversations about teaching with supervisors. While some participants reported being interested in having conversations about teaching with their supervisors, the majority indicated that for various reasons they did not talk with them about teaching. It was reported by PhD students participating in the study that they did not engage in conversations about teaching with their supervisors because they considered the supervisor to be either lacking in teaching skills, as having a negative attitude towards teaching, as lacking time or as having other priorities instead of discussing teaching. However, some participants noted that they were sometimes asked for advice from their supervisors about teaching and they described sharing knowledge gained at the pedagogical course which was welcomed and appreciated by supervisors.

Research question two – **How does the experience of acceptance in an academic community shape learning about teaching from the PhD students' perspective?** The results of the study showed that there were three ways of experiencing acceptance in the academic community: as equal partners (Category 1), as knocking against boundaries (Category 2) and as being on the margins (Category 3). Descriptions of experiences in Category 1, i.e. as equal partners, involved depictions of acceptance of the norms of the teaching community culture, being fully accepted by the community and being afforded the greatest degree of autonomy in their teaching in university, freely exercising their agency. The teaching culture was described as being largely learning-centred and involving a shared concern for quality of teaching and learning.

Reports of experiences in Category 2, i.e. as knocking against boundaries, included descriptions of partial acceptance of the norms of the university teaching culture and partial acceptance of the PhD student by the community. Descriptions in this category depicted a great degree of freedom afforded in teaching; however, there were difficulties in being accepted by the community as participants reported having a learning-centred approach which differed from the prevalent approach perceived in the community. The university teaching culture was described by participants as being more content-centred. The partial acceptance by the university teaching community was described by PhD students in terms of their sometimes-futile efforts to share knowledge and ideas about the learning-centred approach. Exercising agency was described as difficult and it created a feeling of knocking against boundaries. While participants described being involved in some collaborative forms of teaching-related development activities, they also reported experiencing that their voice was not always heard.

Descriptions of experiences in Category 3, i.e. being on the margins, included the least awareness and understanding of the norms of the university teaching culture and a minimal degree of acceptance by the community. Participants re-

ported experiencing limited access to and contact with the university teaching community members, leading to their physical and social isolation, sometimes to the extent of being excluded from conversations about teaching between other members of the community. The university teaching culture norms were reported to be neither fully understood nor fully accepted. Descriptions of acceptance included feelings of obligation to accept the norms but feeling frustrated by them. However, no active pushback of the norms was described in this category. Descriptions of PhD students' experiences of acceptance in Category 3 entailed a minimal degree of autonomy in teaching, which had both positive and negative connotations for participants. There were also descriptions of a lack of opportunities for exercising agency.

Another result concerned PhD supervisors. They were described as not helping the participants understand the university teaching culture norms. Neither were they described as aiding the supervisees to integrate into the teaching community.

Analysing the relationships between the categories, the outcome space revealed a connection between PhD students' acceptance of the norms of the university teaching culture and their own acceptance by the academic community. Category 1 described the most comprehensive way of experience of acceptance, including being accepted by the university teaching community, having the highest degree of positive social interaction with community members, having the greatest degree of autonomy in teaching and fully exercising agency. This autonomy and agency decreased in line with the decreased degree of acceptance by the community and was associated with less interaction and less positive relationships, even to the extent of experiencing friction with other members of the university teaching community. Based on these results, PhD students experienced acceptance of the university teaching culture norms and acceptance by the university teaching community in various ways, not always accepting the norms or being accepted.

Research question three – **How does the process of transformative learning and its context shape learning about teaching and the transformation of conceptions and approach towards learning-centredness from the PhD students' perspective?** The process of transformative learning towards learning-centredness was described by participants of the study as involving its application to their own teaching after gaining theoretical knowledge in the pedagogical course and experiencing it first-hand themselves. Participants described trying to engage students more actively in the learning process and reconsidering the student-teacher roles. The process was not described by all participants as smooth, involving difficulties in reconciling the content-centred approach, that was more familiar and customary, with the new learning-centred approach, as well as dealing with resistance to the learning-centred approach by students.

Transformative learning was reported to be connected with dissatisfaction with one's teaching experienced both before and after the pedagogical course and critical reflection on one's own teaching based on theoretical pedagogical knowledge. In addition, earlier learning and life experiences that enabled to create connections to the learning-centred approach played a role in the transformative learning process. The depth and application of the learning-centred approach

varied. In the case of minimal transformation, the participant described only minimal dissatisfaction with their own teaching was described that was attributed to their lack of teaching experience. Reflection was reported to be an essential feature of transformative learning.

In three cases, participants reported support in the teaching-learning environment for their transformed teaching conceptions and approach towards learning-centredness; one participant reported a lack thereof. However, regardless of the perceived support in the teaching-learning environment, the process was reported to continue, even if this meant, as in one case, leaving the place of employment and starting anew somewhere else. The difference between the supportive environment and the less supportive one was the reassurance and encouragement concerning their changed conceptions and approach received by participants.

5. DISCUSSION

The overall aim of the study presented in this doctoral thesis was to find out PhD students' perspectives on how different ways of learning shape their own learning about teaching. More specifically, how informal conversations about teaching, acceptance of the norms of the university teaching culture, acceptance of the PhD student by the community at university, and transformation of the PhD students' conceptions and approach towards learning-centredness shape their learning about teaching in the higher education context. In the following chapter, the key findings are discussed, and their theoretical and practical contribution to the field of study is considered. This is followed by a methodological discussion, an outline of the limitations of the study, and suggestions for further research. Finally, conclusions and implications of the study are presented.

5.1. Discussion of the key findings

This section outlines the significance of this dissertation on a national as well as an international level. The main results are discussed from the perspective of the theoretical frameworks of this dissertation.

The beginning of the process of studies that form the basis of this dissertation date back to the year 2018. The time since then has been significant for higher education in Estonia, as several major political changes have been introduced. Firstly, in 2019, the Higher Education Act (Riigikogu, 2019) was amended. Then, in 2022, the doctoral studies reform was introduced (Estonian Ministry of Education and Research, 2022). Both changes placed a greater emphasis on the teaching component in higher education in general and on the development of teaching skills during doctoral studies in particular. The findings of the current dissertation provide an insight into PhD students' lived experience of teaching and learning about teaching before the reform, highlighting the need to value teaching more in higher educational institutions and during doctoral studies.

5.1.1. Interplay of informal, formal and transformative learning

The first contribution to the theoretical knowledge this dissertation makes is to highlight **the importance of the interplay between formal and informal learning** reflected in the results of Study I. This dissertation also draws attention to the **role of formal learning in transformative learning** leading to learning-centredness, as reflected in the results of Study III. The results of the current dissertation align with Kyndt and colleagues' (2016) claim that formal and informal learning should not be seen as polar opposites but as complementary in nature and Ellström's (2001) position that one is insufficient without the other to bring about deep understanding – formal learning alone may be too theoretical and informal learning too practical. Additionally, the results of the dissertation are in

line with previous studies in which informal conversations about teaching are understood to facilitate learning about teaching (Knight et al., 2006). According to the results, the pedagogical course was significant in terms of learning about teaching contributing to conversations about teaching and functioned as the basis for the transformation of learning-centred teaching conceptions and approach. The results are in line with the findings of Aščerc Veniger (2016) and Postareff et al. (2008), i.e. that formal pedagogical courses may have an influence on teaching, and on learning conceptions and approach. The formal course, as reported by several participants, provided an opportunity to experience learning-centeredness first hand, and provided theoretical knowledge, which in turn facilitated critical reflection on teaching and learning. For example, to challenge taken for granted assumptions about teaching and learning, and to plan changes in teaching. Additionally, in line with Ley et al. (2014)'s model of informal workplace learning, the results of study I indicated that PhD students wanted to collectively validate their learning about teaching, and they also wanted to provide colleagues with support and guidance, although this was sometimes unwelcome. The extent to which ideas matured and collective knowledge emerged as a result of conversations about teaching is illustrated by the fact that some PhD supervisors were reported to ask their supervisees for advice about teaching. Another illustration was the willingness of PhD students to share their pedagogical theoretical knowledge in their workplace.

The results of the study also demonstrated **that transformative learning is linked to both formal and informal learning** and emphasised the timing of formal learning to facilitate transformation towards learning-centredness. The results of the study indicated that transformative learning tends to be more likely when cognitive dissonance is not too great; this is in line with the results of McChesney and Aldridge's study (2021). Dissonance may be insufficient if there is already an abundance of prior knowledge and positive experiences with employing the learning-centred approach. Dissonance might be too great if there is no prior knowledge or experience (Vygotsky, 1978) of the learning-centred approach. The results of the dissertation demonstrated that the timing of the pedagogical course might also play a role. Where there is no experience of teaching, there might be less benefit from the pedagogical course since it may be difficult to make connections with the real-life teaching context. What needs to be emphasised is that if the aim is to enhance the interplay of formal and informal learning and thereby to enhance PhD students' learning about teaching and to bring about a shift towards learning-centeredness, then the timing of the pedagogical course is critical. The findings of the current dissertation are in agreement with earlier research findings and recommendations by Vilppu et al., 2019, recommending pedagogical courses at the beginning of the teaching career in university or during PhD studies. However, it needs to be approached with caution. While introductory pedagogical courses are indeed necessary and beneficial for beginner university teachers, including PhD students, as a means to introduce the basics for teaching, nevertheless, the provision of courses to those without any teaching experience may preclude any deeper understanding of learning-

centredness, and connections with real life teaching will be less likely to occur, as demonstrated in the results of Study III. Ideally, teaching development will not be seen as a one-time endeavour but rather as a continuous process aimed at different levels of theoretical pedagogical knowledge and teaching experience through a process of dialectical constructivism.

Secondly, this dissertation contributes to an understanding of the **importance of reflection** in PhD students' learning about teaching. According to the results of Study I, reflection in the form of conversations was found to be key to learning about teaching for PhD students. This finding is in line with Mladenovici & Ilie's results (2023) in which the need to focus on self-reflective methods during pedagogical courses was emphasised. As reflection was part of the PhD students' pedagogical course, they also described reflecting about teaching in conversations outside the course, which led to learning about teaching. The results of Study I drew attention to the critical reflection that was found to be necessary to learn from experience. This finding is in line with Schön's (1983) argument that reflection *in action* (during an activity) and reflection *on action* (after the activity) are of greater importance than textbook knowledge. That is not to say that textbook knowledge is irrelevant but rather to consider where it might or might not offer intellectual tools to scaffold learning. To learn about teaching, taking time to reflect both during a teaching situation and afterwards may help to better understand what and why something happened, to better process emotions and to make necessary adjustments in teaching.

However, reflecting alone might be challenging. Just as reflection on one's own teaching practice and about one's conceptions of teaching have been reported to be beneficial for professional learning (Nevgi & Löfström, 2015), peer observations in authentic teaching contexts have been recommended as a means of scaffolding and facilitating professional learning in a community (Noben et al., 2021). As the results of Study I indicated, not all PhD students talk to someone about their teaching. As the pedagogical course provided an opportunity to teach a mini-lesson and to reflect about teaching, it can be beneficial to provide such an opportunity. Additionally, reflecting on one's teaching during a pedagogical course may lead to the continuation of such a practice later, either alone or within the PhD student's university teaching community. During pedagogical courses it is thus important to consider how best to support development of reflection skills and critical reflection of teaching with respect to the learning-centred approach.

Additionally, the results indicated that personal characteristics may have a role to play in reflection practices. Some participants tended to reflect on their own rather than with others. This solitary reflection may have its benefits; however, it may also have drawbacks. Engaging with the collective experience and having an open discourse with others, as Mezirow and Associates (2000) indicated, might help to reflect more deeply. This could be achieved by structuring the pedagogical course to support collective reflection, by providing tasks which challenge existing assumptions and by encouraging critical reflection about oneself and others. Moreover, it could be facilitated by engaging in conversations with

experienced university teachers about teaching, learning about their perspective and reflecting about it later collectively during the pedagogical course. If the university where PhD students are engaged permits classroom observation, this could be another avenue for conversations about teaching, for seeing how others teach and for reflections about how what is seen and discussed could benefit student learning and be transferred to their own teaching. The Community of Practice, with its specific focus on student learning, on tackling the challenges of teaching and on learning with relevance to practice, as described by Wenger-Trayner et al. (2022), also offers opportunities to reflect collectively about teaching.

This dissertation also contributes to understanding the significance of **conversations as a form of informal learning**. In a study about academics' conversations as a form of informal learning, Roxå & Mårtensson (2009) concluded that not all conversations lead to learning. Additionally, Thomson & Trigwell (2018) found that not all academics even engage in conversations that may lead to learning. Peter Senge's (1990) "learningful conversation" focuses on reflection and openness to others' perspective as key to learning from a conversation. These results highlight the significance of the findings of this dissertation. Similarly to Thomson and Trigwell's (2018) findings about conversations among academics, the results of Study I indicated that not all doctoral students had an opportunity to talk about teaching. The results also indicated that not all PhD students participating in the study reported learning from informal conversations about teaching, which aligned with Roxå & Mårtensson's findings (2009) with academics. Based on the descriptions of those doctoral students who participated in the study, the willingness to talk about teaching or reflect more deeply about the teaching experience might be a question of identity. Some PhD students reported not identifying as university teachers because their main job was elsewhere. Identity building is an important aspect in the socialisation and acceptance process of PhD students and their integration into their respective academic community. To facilitate identity building, conversations within the academic communities play a role. While informal conversations about teaching cannot be organised formally, they can be facilitated. Creating comfortable physical spaces for conversations to take place could be one way in which universities can facilitate informal learning in the form of conversations about teaching.

5.1.2. Learning in a community

Thirdly, the findings of this study yielded notable insights into the experience of PhD students with regard to learning about teaching within the university teaching community including PhD thesis supervisors. According to the results of study II, which focused on the variation in PhD students' lived experience of their own acceptance by the university teaching community, and of their acceptance of the university teaching community's cultural norms, it appears that acceptance is nuanced. While some PhD students reported experiencing acceptance in a straightforward manner, others grappled with disparities between their chosen teaching

approach and the prevailing one in the teaching culture or faced challenges in connecting with the teaching community. It was also reported that the norms of the community were not always accepted by the PhD students, leading to different outcomes.

Learning in a community is closely linked with acceptance of the cultural norms of the respective community. Becker in the human capital theory (Becker, 1975/1964) claimed that those who are socialised may go against the established norms. Additionally, Weidman et al. (2001) and Weidman and DeAngelo (2020) noted that there are many ways in which people deal with pressure during their socialisation, and that this does not always result in assimilation of norms. This was also indicated in the results of Study II where PhD students reported not always accepting the university teaching community's cultural norms. It has been highlighted in previous research that Community of Practice (CoP) development does not always take place without tensions (Wenger-Trayner et al., 2022) and that gaining entry into the community may not always be as straightforward as expected (Morrell-Scott, 2019); this echoes the results of Study II. Moreover, Tierney & Rhoads (1993) suggested that newcomers have the potential to affect the organisation and vice versa. Viewing the results from a disciplinary perspective, it might be argued that, in areas where teaching and its development is less emphasised and the prevalent approach to teaching is content-centred, it might be more difficult for PhD students to find support for their learning-centred approach from colleagues or to focus on their teaching development. PhD students' descriptions of their experiences of acceptance indicated that it is easier to exercise agency and to bring about change in the university community when one is perceived to hold similar views about teaching and learning and is considered as "being one of us". However, becoming "one of us" is a matter of trust, which is difficult to build if there are no or very few possibilities to interact and become acquainted with the community members. Even when such opportunities exist, the results of Study II indicate that acceptance depends on the ability to persuade other community members to accept sometimes radically different ideas about teaching than their own. Taking these suggestions seriously and giving PhD students a voice in the community in which they function depends on finding the right people to publicly support these ideas and to give them more weight in the eyes of other community members.

It is also important to draw attention to the isolation described by PhD students in Category 3 who have minimal contact with the university. This result is consistent with the findings of Austin's (2010) study. While it is recommended that PhD students tackle the issue of isolation by being aware of their own agency, and by actively searching for connections with university community members that could help them to become full members (McAlpine & Åkerlind, 2010), this may be considerably more difficult in reality. For those PhD students who have limited contact with members of the university teaching community, such as PhD students working based on authorisation agreements, time alone does not permit their full integration. They lack opportunities to build and develop their networks, as Lave and Wenger (1998) have suggested. For PhD students, relationships are

significant in terms of being accepted by the university community and being awarded opportunities to exercise agency. As Gardner and colleagues (2012) highlighted, members of the academic community serve as gatekeepers and relationships with them matter. Therefore, to learn about teaching, PhD students need to have access to and be able to build relationships with members of the community. Conversely, community members need to be aware that they play a role in helping PhD students' socialisation and their acceptance into the community, which, in turn, helps PhD students learn about teaching.

The results of Study II indicated that dealing with negative experiences of acceptance, coping with resistance and other difficulties within a university community, and the exercise of agency to change cultural norms depends on "disposition" (Eraut, 2004), or character, as well as on participants' relationships with community members. The role of character was illustrated in the descriptions of how actively participants pursued necessary changes concerning teaching in each of their contexts, and how conflicts within the community were reportedly resolved. The results of this dissertation demonstrated that, based on the accounts of the PhD students participating in the study, good relationships and larger networks usually provide better opportunities in terms of teaching and leading changes, and more ways to exercise agency. These results support Giddens' (1991) structuration theory key tenets, i.e. that power in an organisation depends on relationships. Additionally, the results align with Leijen et al.'s (2020) findings that obtaining and maintaining agency to bring about change is affected by both effort and culture. The results also indicated that the teaching-learning environment and acceptance of the cultural norms of the community may either strongly support or hinder learning-centred teaching practices and learning about teaching.

Raising PhD supervisors' awareness is needed to assist PhD students' socialisation and full integration into the university teaching community. Learning about teaching is a collaborative endeavour, with Communities of Practice (CoPs) playing an important role. Previous research has underscored the detrimental effect on PhD students of a lack of engagement and guidance from members of the academic community (Gardner et al., 2012). Consequently, it is crucial to emphasise the significance of communities and the involvement of their members in supporting PhD students' acceptance by the university community and their learning about teaching.

5.1.3. Supervisors and learning about teaching

According to the results of the studies which form the basis of this dissertation, PhD students did not perceive that they had the support of their supervisors on their journey of learning about teaching. According to the results of Studies I, II and III, in general, supervisors were not reported to be the people PhD students spoke to about teaching, did not contribute to PhD students' becoming full members of the teaching community, and did not help to navigate the cultural norms of the teaching community, nor did they facilitate transformative learning. Based on the accounts of the PhD students participating in the study, their super-

visors' focus was mainly on research. This finding is consistent with Jepsen et al.'s (2012) result indicating that the majority of PhD supervisors would prefer that their doctoral students focused on research rather than on developing their teaching skills. Not talking to their supervisors about teaching was, according to participants in the studies, connected to the perception that the supervisor did not value teaching or that the supervisor was a poor teacher. One possible explanation as to why university faculty might not value teaching, or may not be proponents of the learning-centred approach, is elucidated in the results of Petkutė's (2022) study. The academics in her study considered both research and teaching to be integral components of university, yet they identified first and foremost as researchers. As supervisors identify as researchers and see PhD studies' main focus to be research, it is only natural that their conversations concern research and not teaching. This sole focus of supervisors on research, however, may be detrimental to the PhD students' careers. Earlier research has indicated that teaching skills are transferrable skills that benefit both PhD students who continue their career in the university as well as those who are employed outside academia (Edwards et al., 2014; Kindsiko, et al., 2017). Moreover, teaching has been reported to also improve research skills (Feldon, et al., 2011). If universities are interested in encouraging PhD supervisors to focus more on their supervisees' teaching skill development, then university career models need to indicate that there is value in teaching and its development, and that teaching is on a par with research.

The results of the studies indicated that PhD students did not perceive to receive support for their teaching development from supervisors because their own conceptions about teaching and learning differed from those of their supervisor. The reason for rejecting the ideas of learning-centredness by supervisors may be connected to the idea of the student as customer. In Petkutė's study (2022), there was a perception that accepting the educational reforms would mean conceding the student as customer approach. This was perceived by academics as forcing them to focus not on the content of their subjects but on the satisfaction of student-customers. According to the academics involved in the study, this "flattering of students" was reported to lower academic standards, which in turn conflicted with the academic ideals of the university, namely that of intellectual challenge. While PhD supervisors were not involved in the studies that form the basis of the current dissertation, the descriptions by participating PhD students indicate that their supervisors were, as academics in Petkutė's (2022) study, concerned with "spoiling" the students with the adoption of a learning-centred approach. Participants descriptions also indicate that supervisors held the opinion that students themselves were to blame if they did not acquire the content well enough, which is consistent with the model 1 (blame the student) proposed by Biggs and Tang (2011).

While PhD students in the current study reported not taking their supervisors' opinions too seriously, they nevertheless sometimes questioned whether they were on the right path when opposing the views of their supervisors. This finding is significant as it highlights that, even for those PhD students who have adopted a learning-centred approach, having supervisors as authority figures may under-

mine their confidence in their teaching-related decisions. It might be especially problematic for those PhD students whose transformative learning towards learning-centredness is in the initial stages. At this stage, it might be confusing or challenging to contradict their supervisor's views and stifle or even hinder their further progression towards adopting a learning-centred approach. If supervisors do not value or prioritise teaching, it may be difficult for PhD students to do so, as supervisors are their academic gate-keepers. It might be difficult to ignore the comments and perceived university community cultural norms if these are not supportive of the learning-centred approach. In this sense, PhD students face a dilemma – whether to follow the traditional teaching approach and align with the views of one's supervisor and/or the respective community or to adopt a learning-centred approach and face opposition.

Additionally, if supervisors are seen to value research over teaching, as is generally the case in universities (Chen, 2015; Geschwind & Broström, 2015; Marsh & Hattie, 2002; Norton et al., 2010), this might create additional dilemmas for PhD students. Firstly, they will need to find a balance between research and teaching in their academic role and not focus too narrowly on research, as pointed out by Andreson et al (2010). Secondly, they will need to value and develop their teaching even if the academic community around them does not. Learning to deal with difficulties or with opposition to the learning-centred approach within the academic community might depend on the personal characteristics, or disposition, of the learner (Eraut, 2004). According to results of the studies that form the basis of this dissertation, participants who described having adopted a learning-centred approach reported having less difficulty disregarding any negative comments made by their colleagues or their supervisor. They reported feeling as though they had a mission. This transformed view made them active proponents and vocal advocates of the learning-centred approach. Their descriptions included less concern for conformity or harmonious relationships with other members of the community and a greater concern for the importance of spreading of the message of learning-centredness. At the same time, learning about teaching happens within a context and, as stated above, is heavily influenced by the norms of the local culture, by the value placed on teaching by the respective institution or department and by leadership (Gibbs, 2013). As Gibbs (2013) pointed out, the limits to what an individual teacher can do, regardless of their characteristics, in an environment which is hostile to change or in a culture where teaching is not a priority, should not be underestimated. It is also vital to consider the power dimensions in universities. Supervisors and senior academics have more power than PhD students. If they oppose PhD students' ideas, they can bring any initiated changes to a halt. They can also bring about negative consequences on PhD students' study or career progress. At the same time, the role of leadership in teaching should be emphasised, as it may be key to the distinction between educationally more or less effective departments (Gibbs, 2013). Leaders can do a great deal to enhance learning-centredness in their respective units and to implement the permanent changes necessary to support PhD students' learning about teaching.

Supervisors' attitudes towards teaching might be problematic in terms of PhD students' learning about teaching. While the academics' accounts of their experiences with higher education reform and perceptions of the learning-centred approach described by Petkutė (2022) are illuminating and provide an insight into the thinking behind the opposition to these, there is evidence that putting research first does little to enhance student learning, and it has not been proven whether there is a strong connection between research and effective teaching (Elken & Wollscheid, 2016; Jenkins et al., 2007). The described antagonism between teaching and research also reveals a lack of theoretical knowledge about teaching and learning on the part of academics. While they describe valuing theoretical knowledge in their respective disciplines, there seems to be less recognition that teaching is a separate area of expertise. The results of the current study indicate that PhD students who have completed a pedagogical course focusing on the learning-centred approach may begin to be more aware of it and this may lead to transformative learning which, in turn, may lead to changes in conceptions and approach towards learning-centredness. Abstaining from conversations with PhD supervisors might be related to PhD students' realisation that they might have become more knowledgeable about teaching and learning than their supervisors and need to keep this knowledge to themselves so as not to harm the relationship with the supervisor or show disrespect, as it might be construed.

On the other hand, the results indicated that some doctoral students did not see the need to talk about teaching with their supervisor. This was partly explained by their not always identifying themselves as university teachers or seeing their future connected to the university. Parallels can be drawn with earlier research suggesting that some academics only identify as researchers (Brownell & Tanner, 2012) and it is difficult to change that perception (Vermunt et al., 2017). It might be concluded that identity drives the willingness to learn both formally and informally about teaching and transform one's approach towards learning-centredness. Additionally, when there is a weak connection to the university community, the identity of PhD students who work in a professional field outside the academia might remain that of a professional in the field and not that of a university teacher. To facilitate identity-building as a university teacher, closer connections and options to be agentic in the university context are needed.

5.1.4. Transformative learning

The findings of this dissertation expand previous knowledge on the transformative learning of PhD students. Transformation of teaching conceptions and approach towards learning-centredness, as indicated in the results of Study III, may start from a perceived inconsistency (disorienting dilemma) in one's own teaching, first hand experiences of the learning-centred approach and moderate cognitive dissonance.

The results of the study indicated that a key component of transformative learning is the perceived dissatisfaction with one's teaching or a "disorienting dilemma". Therefore, prior teaching experience has a role to play in learning about

teaching. If there is no or very limited teaching experience, transformative learning is less likely to occur. This result is consistent with earlier studies where, for example, in a systematic literature review concerning pedagogical training impact, it was noted that a “critical mass of teaching development input or of ‘foundation’ pedagogic knowledge and understanding” may be needed to turn what is learnt at a course into teaching practice and that more experienced university teachers adopted more quickly and to a greater extent after participating in the courses (Parsons et al., 2012, p.32). Therefore, the role of supervisors becomes critical for those PhD students who do not have many opportunities to teach. One possible way in which supervisors could help their supervisees obtain teaching experience is to offer them these opportunities in courses they teach. Although these occasions may be limited in time and breadth, they still offer an experience of teaching that may facilitate the emergence of “disorienting dilemmas” and thus start the process of transformative learning. At the same time, it is important for supervisors to attend teaching development courses themselves. This also provides experienced university teachers with an opportunity to enhance their knowledge about teaching and supervision, as well as setting an example to PhD students, and models the behaviour where not only research about a subject is a never-ending quest but so too is teaching.

Additionally, according to the results of the study, the process of transformative learning towards learning-centredness was described by participants in terms of experiencing it first-hand themselves. As Carl Rogers (1969; 1983) argued, experiential learning denotes a deeper change and personal growth. Therefore, it can be argued that experiential learning is significant for adopting a learning-centred approach.

The results of the study demonstrated that transformative learning tends to be more likely if the cognitive dissonance is not too great. This result is in line with the results of McChesney and Aldridge’s study (2021). Furthermore, it is important for transformative learning that there be both formal and informal learning opportunities. The results were also consistent with Berger’s (2004) findings that the trajectory of transformative learning is anything but easy or straightforward, making some people wish to return to their safe zone (to what they believed about teaching and how they taught before) while there are also others who seek out and revel in the transformation. The results indicated that, in three cases, where transformative learning had taken place either fully or to a moderate degree, it involved changes in teaching. In one case, where transformative learning was at an early stage, no changes in teaching followed. As Mezirow (2000) argued, it is essential to make a conscious decision to act even after undergoing a transformative shift in one’s thinking perspective.

5.1.5. Conclusion of discussion of key findings

Looking at the findings of the three studies in combination, they support the three dimensions of learning proposed by Illeris (2002; 2007): content, social and incentive. The interplay of formal and informal learning in the current study meant for PhD students not only the acquisition of content knowledge, skills and attitudes related to teaching and learning, but also social interaction with peers and colleagues in the university environment concerning teaching, which extended beyond the university into personal spheres. Transformative learning, while in the current thesis was not directly approached through the lens of emotions and motivation, is indirectly linked to volition, i.e. PhD students' will to change their teaching and transition towards the learning-centred approach. All three studies consider the context, where learning about teaching, the cultural and social processes that encompass the journey of development and the formation of social behaviour take place, as Selander et al. (2021) suggested. Following the principles of dialectical constructivism (Rogoff, 1990), the meaning of a phenomenon becomes clearer through interaction with others, by sharing, debating, and helping others to find meaning. In studies I and II, PhD students reportedly learnt about teaching through informal conversations and through the experience of acceptance into the university community. Although not all interactions were supportive and positive, the meaning of teaching became clearer through them. PhD students reported encountering evidence in the teaching-learning environment of the theories of teaching described by Biggs and Tang (2011), where the focus was on findings flaws with students (level 1) rather than on student learning (level 3).

While this doctoral thesis has value in terms of a deeper understanding of PhD students' learning about teaching and thus contributes to the enhancement of doctoral education in Estonia, it also has significance on the international level. The concerns regarding the lack of preparation of doctoral students for teaching are not specific to Estonia but have been identified across the world. Therefore, a deeper understanding is needed of how PhD students learn about teaching and what contributes to their transformation towards learning-centredness. This has been set as a political aim for higher education on a European level (Paris Communiqué, 2018) and the current doctoral thesis provides an insight into it.

In conclusion, the findings of this doctoral thesis provide a unique view of PhD students' learning about teaching. The results of the current thesis concerning Estonian PhD students are, to a large degree, aligned with those previously published internationally. Based on the results, according to the PhD students who participated in the study, formal and informal learning are intertwined and the experiential aspect of learning-centredness is essential to learning about teaching in higher education. Context plays a role in the socialisation and acceptance of PhD students, either facilitating or impeding learning about teaching in higher education. Critical reflection is a crucial factor in learning about teaching for PhD students and a disorienting dilemma stemming from prior teaching experience was reported to be the trigger for transformative learning that led to

the adoption of learning-centred approach. It is apparent that learning about teaching in a higher education context happens in a variety of ways. Formal and informal learning each have their place. PhD students' learning about teaching is both facilitated and hindered by the university community and culture, and by their acceptance or rejection of the norms within them. PhD students' learning about teaching is also affected by their ability to critically reflect on their own assumptions and those of others about teaching which may lead to transformative learning and adoption of the learning-centred approach.

5.2. Methodological discussion

This section presents a discussion regarding the methodological choices of the studies. It is presented as a journey of the different possibilities considered at different stages of the studies. This dissertation sought to find out PhD students' perspectives on how different ways of learning shape their own learning about teaching. More specifically, how informal conversations about teaching, acceptance of the norms of the university teaching culture, acceptance of the PhD student by the community at university, and transformation of the PhD students' conceptions and approach towards learning-centredness shape their learning about teaching in the higher education context. The dissertation was grounded in qualitative inquiry and constructivism (Crotty, 1998; Mack, 2010), based on the assumption that reality is relative to people and context (Lincoln & Guba, 2013) and took a postmodern standpoint, looking for different perspectives (Saldaña, 2011). The methodology based on these assumptions was explanatory, involving dialogic techniques and the exploration of several knowers, their sense- and their meaning-making. The qualitative interpretive approach was chosen due to its ability to uncover issues through the participants' perspectives (Hennink et al., 2020). The qualitative interpretive approach also assisted comprehension of participants' experience of learning about teaching in higher education, their experience of the cultural norms of university and their transformative learning journey towards learning-centredness, by exploring these within the participants' contexts. As a qualitative approach allows to better understand complex issues (Marshall, 1996), and as learning about teaching was considered a complex issue, it was deemed to be suitable for the purposes of the dissertation. A qualitative approach was also favoured over a quantitative one as a qualitative inquiry begins with the participants' perspectives and behaviour, whereas a quantitative approach starts with a clear theoretical focus and predefined dimensions and categories (Bryman, 1989). In the current dissertation, participants' perspectives were the starting point of the inquiry, and it was necessary to openly explore these perspectives without any attempt to fit the responses into a pre-existing framework. As argued by Alvesson & Sköldbberg (2009), the choice between the qualitative and quantitative approaches must be made based on their relevance to the particular research problem and object. The research problem in the current dissertation was the lack of knowledge about doctoral students' learning about teaching

in a higher education context. The object of the research was PhD students' experiences and perspectives on learning about teaching. Considering that people's perceptions and understanding of learning and its surrounding contexts are subjective, a qualitative approach was considered to be more relevant.

A number of choices were made during the research process. One of these was the choice of methodology. In Study I, inductive thematic analysis was selected. As the central theme of the investigation was that of conversations, other methodologies were considered, such as grounded theory. Grounded theory investigates social processes unfolding within human interactions (Broussard, 2006). Grounded theory researchers aim to uncover and conceptualise the core of interactional processes, leading to the development of a theory (an explanation) that provides a fresh perspective on the observations that gave rise to it (Creswell et al., 2007; Hutchinson & Wilson, 2001). However, the aim of Study I was not to provide an explanation about the process of conversations about teaching or to identify the reasons why the conversations took place. Rather, it aimed to identify patterns in participants' responses as to how informal conversations about teaching facilitated their learning about teaching and it was grounded in the experiential orientation of thematic analysis which seeks to find out how participants think about and act in relation to the phenomenon under study. Thematic analysis accepts the assumption that language is a reflection of the participant's reality (Terry et al., 2017). Moreover, thematic analysis was selected because the generation of codes and themes is open and there is no expectation that the anticipated results will fit into a pre-existing framework (Braun & Clarke, 2006).

In Study II, a choice was made to use phenomenography. Phenomenology was considered as an alternative methodological choice. Phenomenology aims to capture the views of multiple participants and to describe the commonalities in their experience of the phenomenon or the essence or nature of the phenomenon under study (Creswell et al., 2007). However, the selection of phenomenography over phenomenology was made because the former focuses on variation in people's experiences and understanding of the phenomenon instead of clarifying the essence of the phenomenon (Larsson & Holmström, 2007; Marton, 1980). It was deemed more important to understand the various ways in which PhD students experienced acceptance, the phenomenon under study, and the relationships between the experiences. The choice of phenomenography enabled a much more nuanced picture of learning about teaching to be presented, taking into consideration the university community context, socialisation and the exercise of agency.

In Study III, a comparative multi-case study was selected as a method. The aim of a case study is to achieve a profound understanding of specific aspects of phenomena; it should go beyond mere counting and focus on a close examination of the experiences and perceptions of participants (Mabry, 2008). Learning about teaching may involve transformative learning as well as informative learning, although transformative learning is not necessarily experienced by all students. For this reason, the aim of the third study was to understand in depth how a complex phenomenon such as transformative learning takes place, from the perspective of participants. There was deliberation concerning which cases to

select. An investigation of typical cases can reveal the present circumstances, patterns and structures surrounding them, as well as the perceptions of participants, whereas atypical or divergent cases can prove to be highly illuminating (Mabry 2008). Study III employed both typical (where transformative learning had led to the adoption of the learning-centred approach) and atypical cases (where the transformative learning was in an early stage or only some elements of adopting learning-centred approach were demonstrated). The choice to include only typical cases was abandoned, as consideration of the different contexts, life events and outcomes for each case enabled a fuller understanding of the phenomenon. A more thorough picture of the phenomenon could have been achieved by engaging a wider range of participants, as social reality is co-created by people who are involved in the phenomenon (Mabry, 2008). In the current dissertation, the involvement of PhD supervisors as co-constructors of the phenomenon of transformative learning towards learning-centredness was abandoned as they were not identified by participants as either aiding or preventing transformative learning from taking place.

In conclusion, the methodological choices made enabled an understanding of PhD students' perspectives of learning about teaching in higher education. More specifically, it was possible to find out the significance of formal learning for informal learning through conversations, to identify the qualitatively different ways in which PhD students experienced acceptance of the university teaching culture norms and of their own acceptance into the teaching community, and to explore the ways in which PhD students described the transformation in their teaching conceptions and approach towards learning-centredness, taking into consideration the surrounding context. Other methodological choices could have led to the development of a theory or a model regarding conversations about teaching, to the definition of the essence of PhD students' experience of acceptance of university community norms, or the presentation of patterns of transformative learning which lead to learning-centeredness.

Individual interviews as a data collection method, as described by Gaskell (2000), enabled the exploration of the personal life world of the participants in detail, and allowed the individual respondent to take centre stage. In a focus group interview, which could have been used as an alternative data collection method, the focus is on the interaction between participants, and on their reactions to what others in the group say. Focus group discussions have a number of benefits, such as the generation of creative insights and the consideration of innovative ideas; however, this data collection method also has a number of limitations, such as attitude polarisation, which can result in the adoption of more extreme positions. Additionally, considerably richer descriptions concerning personal experiences and activities, as well as of the specific surrounding conditions can be elicited in individual interviews (Gaskell, 2000). Individual interviews in the current thesis enabled the exploration of the personal life worlds of PhD students in detail and yielded rich data concerning the ways in which PhD students learn about teaching in higher education and how their individual contexts shape this. As two of the aspects explored were the change in teaching through transformative learning, and

the process of adapting to the cultural norms of the university community, the employment of serial interviewing instead of a single point of data collection could have been employed (Read, 2018). However, as participants described their past experiences and reflected on their progress in detail, data collection on multiple occasions was deemed unnecessary and a single point of data collection was considered sufficient.

5.3. Limitations and further research

A limitation of the study is that conversations include interaction between two people; however, the conversation partners, with whom the doctoral students had conversations about teaching, were not included in the data collection. This limits the perspective of the accounts of the conversations. As one of the findings was that conversations between PhD students and their supervisors about teaching are limited or non-existent, a natural progression of this work would be to explore the nature of conversations about teaching between PhD students and their supervisors. The results indicated that from the participants' perspective, supervisors were not facilitating network-building or their integration into the teaching community; further research could therefore focus on supervisors' perceptions of their role in helping their supervisees become full members of the university teaching community. One of the options to include supervisors could have been to do paired interviews of PhD students and their supervisors. This would have illuminated the nature of their conversations about teaching and made the position of supervisors clearer. At the same time, the power imbalance between the PhD students and their supervisors could have negatively affected the data collection. For example, students' fear of bringing up negative experiences or examples could have resulted in less rich data.

The study was conducted with PhD students from one country, Estonia, and the majority of participants were from one university. A more international sample and a more diverse group of doctoral students from a wider range of universities may have resulted in different outcomes. Further research could concentrate on a more international sample. Selecting participants from a wider pool of universities in Estonia may also have generated a different perspective.

Another limitation of the study was that the data analysis was done by either one or two researchers. A wider discussion of the results of analysis with the ERASMUS+ project team members might have led to different outcomes. However, in qualitative studies, the aim is not to get to objective truth, and a certain level of subjectivity in data analysis cannot be avoided. Therefore, the discussions between two researchers to minimise any potential bias and differences of opinion in the data analysis process were considered sufficient.

Given the recent doctoral study reform in Estonia, a potential progression of this research could be a longitudinal study looking into the shifted emphasis on teaching in higher education in both the Higher Education Act (2019) and

doctoral curricula in Estonian universities. The relevance of this shift to PhD students' learning about teaching might provide new perspectives.

5.4. Conclusions and implications of the study

In the following section, conclusions, implications and recommendations of the study to enhance doctoral students' learning about teaching are outlined. Theoretical, methodological and practical implications are presented in an intertwined manner due to a degree of overlap between them.

The findings of this study indicate that the following aspects should receive more attention in order to enhance PhD students' learning about teaching in the higher education context.

- 1) It is important for PhD students' learning about teaching that they **gain theoretical pedagogical knowledge in conjunction with experiencing learning-centredness themselves**. The pedagogical course offered at the University of Tartu served that purpose for the participants of the study. Formal learning had the potential to create a spillover effect for the participants of the study and it may permeate conversations about teaching that lead to learning about teaching. However, instead of “tips and tricks”, the pedagogical course aimed at PhD students should be focused on the learning-centred approach in theory and practice and on enhancing the value of teaching in higher education.
- 2) The next aspect deserving attention has to do with **teaching experience and formal learning**. Prior research (Vilppu et al., 2019) suggested that pedagogical courses should be completed during the doctoral studies or at the beginning of a teaching career at the university even before gaining teaching experience. At the same time, the usefulness of pedagogical courses when the cognitive dissonance is too large or too small, has also been highlighted by McChesney and Aldridge (2021). Based on the results of the studies that form the basis of this dissertation, transformative learning that profoundly shifts teaching conceptions and approach is rooted in what Mezirow (1994, 2009) calls a “disorienting dilemma”, that is, dissatisfaction encountered in one's teaching. Without earlier teaching experience, formal learning may not create a deep understanding of learning-centredness, as there is no experience to link the knowledge to. Hence, the knowledge may stay theoretical instead of becoming the first trigger towards transformative learning. Therefore, introductory pedagogical courses could be completed without any teaching experience first, then followed by other ways of teaching skill enhancement – reflection groups, classroom observation, follow-up courses focusing on the learning-centred approach and critical reflection. One way to provide all PhD students with teaching experience is to incorporate it into the pedagogical course. Additionally, creating a lesson plan, compiling a syllabus and considering the implications of teaching for assessment are excellent exercises to gain both theoretical and practical knowledge about teaching in higher

education. Furthermore, as the Estonian reform of doctoral studies has focused more on the advancement of teaching skills, and many doctoral students are required to teach during their studies, it is likely that doctoral students can use and test what they have learned at the pedagogical course in practice and thus benefit more from the formal learning.

- 3) A critical aspect of learning about teaching for PhD students is **reflection**. In order to learn from informal conversations about teaching and to bring informative learning to the level of transformative learning, reflection is key. As critical reflection is crucial in bringing about change in teaching approach and conceptions, one way to enhance it is to model and facilitate it during a formal pedagogical course. It is challenging to tackle taken for granted assumptions regarding teaching and learning alone, therefore engaging with a wider range of perspectives might be helpful in this respect.
- 4) Another notable aspect of PhD students' learning about teaching is related to **PhD thesis supervisors**. In a study about PhD students' significant conversations about teaching, dissertation supervisors were most frequently listed as PhD students' most significant conversation partners (Simona & Pleschová, 2021). This signifies that PhD students do expect to talk about teaching with their supervisors. While the results of the current dissertation in some respects confirmed the findings of earlier studies, i.e. that PhD students would like to talk to their supervisors about teaching and learn from them, they also indicated that this was not always the case. Conversations about teaching were avoided for a number of reasons, including lack of time or the prioritisation of talking about research, but they were also avoided because the supervisor was sometimes not considered to be an authority figure in terms of teaching. The reasons for which PhD supervisors prioritise both their own and their supervisee's research may be clear; however, it may have an impact on PhD students' future career options. PhD supervisors need to be more aware of the benefits for PhD students of obtaining teaching competencies and engaging in teaching development.

The findings of this study suggest that, while it is understandable that PhD students' supervisors may value research more highly than teaching for several reasons, and may have a chronic time deficiency, they nevertheless have a responsibility towards the university, to support the future generations of university teachers. Furthermore, supervisors also act as role models for PhD students in terms of scholarly conduct. As the reforms in higher education in Estonia and the world indicate, there is an emergence of a clearer focus on teaching. To be a modern scholar and an academic goes beyond publication of scientific research and has more than ever to do with approaching teaching in a scholarly manner. As Nygaard and Holtham's (2008) suggested, a shift towards learning-centredness can take place if there is due consideration of the university's internal (students, teachers, administration, faculties, departments) and external (politicians, the media, employers) stakeholders and the complexity of the context. Thus, to

facilitate this shift in universities, it needs to be more clearly reflected in their evaluation criteria (for example, institutional accreditation and research and development evaluation) as well as in the recruitment and promotion criteria of academic staff. If political calls to value teaching and to support a learning-centred approach remain empty slogans and, in reality, universities and academic staff stay focused on research, no real change is likely to take place. Biggs & Tang (2011) wrote about the role of assessment in student learning, stating: “Assessment determines what and how students learn more than the curriculum does” (p. 197). Similarly, it could be argued that for universities and academic teachers, how they are assessed determines what they spend their time and effort on.

While the Mertonian norms or “institutional imperatives” (Merton, 1973 [1942], p. 270) noted above should be ideals to strive for, higher educational institutions seem to be more under the sphere of influence of the counter-norms. The isolation and solitariness highlighted in the abovementioned scientific literature are also reflected in the results of this dissertation, especially the sole focus of PhD supervisors on research. One way to strive towards the Mertonian norms is to create opportunities for collaboration; other ways include fostering communication within academic communities and supporting conversations about teaching. The creation of Communities of Practice, including PhD supervisors, might be another possible option, with a shared concern for student learning, theoretical teaching-related foundations and an interest in disseminating the latest scientific knowledge created by its members. The creation of such communities might facilitate a deeper understanding of the learning-centred approach and aid distancing from the perception that this approach is something forced on academic teachers top-down, i.e. from the political and administrative levels. Such initiatives already exist in some parts of the world, such as in the UK, Australia and in some countries in Europe.

5) The next aspect deserving attention regarding PhD students’ learning about teaching involves **consideration of the university community; socialisation into it and acceptance by it**. Learning about teaching is contextual and is shaped by the community and its cultural norms. Communities may offer different possibilities for conversations about teaching, cooperation and learning. Communities are not static but in a constant state of change, and doctoral students have the ability to shape them. This can be done by having conversations with colleagues about teaching, initiating changes, participating in curriculum development etc. Academic developers might consider creating opportunities to connect and facilitate networking for doctoral students among themselves. They may also consider encouraging doctoral students to be active in student organisations, to participate in teaching related conferences and to be the agents of change. Peter Senge (1990), when introducing the concept of “learningful conversation”, linked it to the mental models of individuals and management teams, which have a profound effect on the functioning and effectiveness of organisations. He claimed that these mental models need to

be exposed and challenged in the form of dialogue, leading to a true “thinking together”, and he considered this to be a prerequisite for change. Therefore, how management teams think about teaching, the extent to which they value teaching and its development, and the assumptions on which these mental models are based, matter. Senge (1990) suggested that when a team is learning, it allows individuals in it to grow faster, as well as enabling the team to achieve exceptional results. It could be concluded that if organisations lead a dialogue with its members, unearthing ingrained ways of thinking without giving rise to defensiveness and truly “think together” as Senge suggests, it could be discovered that some assumptions are not based on a scientific worldview or based on facts. Such explorations, as Senge claims, are more effective in groups rather than individually and teams are the core units of learning in an organisation. Organisations can foster mental models that truly support the learning of both individuals and groups and which encourage change, leading to long-term benefits. Thus, it could be argued that if PhD students do not have to “fight” for the right to talk about learning-centredness and prove to colleagues that it is a worthwhile endeavour, their transition into the full role of university teacher may be considerably easier. Instead of being the problem of a single individual, it becomes a systemic issue and the whole organisation becomes involved in creating a shared view (Senge, 1990). In this way, the organisation develops a shared interest in student learning that is not imposed top-down, but manifests as a form of dialogue that is negotiated and gradually developed.

- 6) The last aspect considering supporting PhD students’ learning about teaching has to do with **valuing teaching**. As previously discussed, when teaching is not valued in a university it is not the problem of a single supervisor but rather a systemic problem. When PhD students enter the system, it is far more difficult for them to bring about change and advocate for the learning-centred approach if the established members of the academic community do not support it. Fighting the system might be easier for some PhD students than others, depending on their characteristics and the ways they manage conflict or use their agency, but eternal opposition and frictions with powerful members of the community do not contribute to the mental wellbeing of PhD students and may even lead to detrimental career outcomes for them. A PhD student, however interested in student learning and in developing their own teaching, cannot single-handedly change the system. Given an opportunity by the community, PhD students can act as agents of change, can engage in discussions about teaching, can contribute their time and effort to explaining the essence of learning-centred teaching, can share their theoretical pedagogical knowledge and can help to link the theoretical with the practical.

Based on the results of the studies that form the basis of the dissertation, the following recommendations are made:

- Firstly, the doctoral curriculum needs to have a pedagogical course aimed at the learning-centred approach in conjunction with opportunities for PhD students to teach. The results of this dissertation highlighted the need for theoretical pedagogical knowledge as a basis for supporting a learning-centred teaching approach and conceptions. It is, however, important that the course does not stay too theoretical and that there are teaching opportunities before, during and after the course. This facilitates the creation of “disorienting dilemmas” which later, together with obtaining theoretical pedagogical knowledge, help doctoral students to focus on student learning and adopt a learning-centred approach. Additionally, the pedagogical course should not be a one-off. Further teaching development opportunities should be available after completion of the course and after gaining some teaching experience. These teaching development opportunities might be offered by academic developers, so as to include those members of the university teaching community who may facilitate PhD students’ network-building and expansion and be available to PhD supervisors as well. In these situations, it is necessary to facilitate a collegial atmosphere where all participants are regarded as colleagues and peers learning together and from each other.
- Secondly, universities need to raise awareness among academic staff that teaching skills are necessary for doctoral students’ career advancement, for their identity-building as university teachers and for their future prospects. Universities must take the necessary steps to create a system which values and enhances teaching. This need for awareness might be especially relevant, and at the same time more difficult, in those fields where the university recruitment and promotion criteria are less related to teaching. Following the suggestions by Gibbs (2013), university teachers’ learning about teaching can be developed through three dimensions: firstly by focusing on individual teachers (e.g. classroom observation and feedback, discussions of teaching philosophy and classroom practice linked to teaching theory), secondly by focusing on groups of teachers (e.g. department-wide discussions about teaching, curriculum and program-wide teaching change) and thirdly by focusing on the institution (e.g. changing promotion criteria to emphasise the value of teaching, developing facilities to better support learning). In faculty development programs, academic developers might want to particularly focus on PhD supervisors and on the enhancement of their learning-centred approach. This could be done for example by creating reflection groups where teaching is discussed, and the learning-centred approach scaffolded. Additionally, as Stes et al. (2010) suggested, instructional development interventions spanning over a period of time tend to yield more favourable behavioural outcomes as compared to one-time events, therefore the faculty development plans cannot simply aim at completion of one or two pedagogical courses. Institutions can incentivise academic teachers to obtain and develop their pedagogical knowl-

edge, and this can have many positive spillover effects for PhD students, such as more theory-informed conversations about teaching, critical reflections on teaching and the introduction of teaching role models (within the same and other institutions). This is not by any means an easy endeavour and involves a re-conceptualisation of the university teacher identity that moves beyond solely that of a researcher. As highlighted in the results of Petkutė's (2022) study, the change cannot be forced top-down, as it may lead to stronger resistance. While it is understandable that academic teachers have many duties and tasks and suffer from a chronic lack of time, ultimately, it is a question of significance and values. If the university and its academic teachers value teaching, then resources (including time) and opportunities can be found.

In conclusion, this dissertation proposes several changes to the ways PhD students learn about teaching. Universities could establish hiring and promotion schemes that place more emphasis on teaching alongside research outputs. Organisations could also do a great deal more to enhance a learning-centred approach among their academic teachers not only in the form of formal learning but by providing a variety of flexible and inviting ways to talk about teaching and to engage with the theory of teaching in higher education.

APPENDICES

Appendix 1. Interview guide

A. Teaching

1. Please describe your teaching this semester.
 - a. How do you prepare your teaching?
 - b. How have you organised assessment in your teaching?
 - c. Was there anything from the pedagogical course that inspired you to try something new in your teaching? If yes, please describe it. If no, what do you think are the reasons it did not find a place in your teaching?
 - d. How or based on what have you decided to teach the way you do?
 - e. Who or what has influenced the way you teach? How?
 - f. How do you approach supervision? What, if any, are the similarities with teaching?
2. Conversations
 - a. With whom have you had conversations about teaching? Please list those people and put them in circles on the worksheet.
 - b. Please describe those conversations.
 - c. Do you feel there is someone you would like to talk (or talk more) to about teaching? What would you like to talk to them about? Who do you talk to when things in teaching do not go well or as planned?
 - d. Have you shared or discussed your experience of the pedagogical course with someone? What aspects of it?
 - e. After the completion of the course, have you felt that the conversations about teaching are somewhat different? Please describe the change.
 - f. Are you still in contact with anyone from the course? If and how has teaching been included in those conversations?
 - g. Where do conversations about teaching take place (physical context)?
 - h. What facilitates or hinders teaching-related conversations?
3. How do you see teaching as part of your career in the future?
4. In your opinion, how are conversations about teaching supported in your research group/ department/ institute?
 - a. How or what shapes the environment that facilitates or hinders conversations about teaching?
 - b. Under which circumstances or when does your research group talk about teaching?
 - d. Who are the participants in conversations about teaching?

5. What do you talk about when you discuss teaching with colleague(s)?
 - a. Do you consider talking about teaching with colleagues as something usual?
 - b. When and with whom do your colleagues who teach talk about teaching?
 - c. Please describe one such conversation.

6. Initiatives. Are you aware of initiatives in your department/ institute that aim to develop the quality of teaching?
 - a. Who are involved in those initiatives?
 - b. How can PhD students contribute to these initiatives?
 - c. Who and what role play in development and application of those initiatives?

Appendix 2. Research diary

xx.xx.2018	<p>[An excerpt from my teaching philosophy]. When I think about my teaching philosophy and the circle with whom I talk about teaching, I have changed my principles a lot over the years, while the circle of people I have conversations with has remained small. Having completed teacher training, I still had the feeling that I was “playing” at being a teacher and did not feel secure at all in my role. The institution where I first started working as a teacher and where the teaching method was very strictly prescribed also probably played its part. However, this was not at all how I saw teaching and what I considered to be right. I learned to see things in learning-centred ways after I changed jobs, completed trainings organised by the British Council and internally felt the need to be a good teacher to my students. Participating in the Primus program trainings funded by the European Structural Funds broadened my teaching philosophy further.</p>
xx.xx.2018	<p>1st Interview</p> <p>It seemed that we got substantive answers to our questions from X’s interview. It would be necessary to think about a question that would help to understand how deep and based on trust these conversations about teaching are. Now the interviewee listed the people they talk to about teaching, and named the topics they talk about, and I guess there was also some talk about the frequency. But how frank and deep are these exchanges of ideas, we did not quite get to that. Reflecting on the interview, Mari and I thought that we should add a question to the second part regarding, for example, failures in teaching. Because you wouldn’t talk about problems or failures with a person you don’t trust. Maybe it would open a dimension about the depth of conversations at some level.</p>
xx.xx. 2018	<p>2nd Interview</p> <p>Since it seemed to me that the conversations described by the interviewee did not appear to be deep, the question arose, how does talking with an incompetent person shape a doctoral student’s understanding of teaching? That if an older and more experienced colleague doesn’t want/can’t discuss why the students’ feedback was negative or what should be changed the next time to make the teaching clearer and of higher quality, what kind of message does it convey? Or if you discuss with your friend, who is also a supervisor at another university, about supervision and simply complain that the students do not rewrite the work according to the comments, but do not follow this with any analysis of why this is so or how to improve the situation, then this discussion is just about expressing personal opinions and venting frustration. So, is it a significant and deep conversation? What is learnt from it? In my opinion, the topic of depth needs more attention. We did get a response about talking about failures. However, we realised that this does not show the depth of the conversation (but rather the blaming of the students), so perhaps we should read more about how to better ask the interviewees about depth.</p>

xx.xx.2019	After the 3 rd interview. It is important, in my opinion, to dig a little deeper regarding those things that people themselves do not consider to be teaching at first. Because for example, people approached the interviewee with questions, after which he created a group to talk about these questions and share his experience. He recognised that learning in this group is multi-directional; not only does he as a <i>guru</i> teach them, but they also teach him.
xx.xx.2019	Some thoughts about university culture for the discussion section – if or how is the development of teaching staff and doctoral students aligned with the culture? How do we find out? Was it important to deal with resistance in the beginning? How can we get evidence of what the resistance was and how it was dealt with?
xx.xx.2019	After a presentation at an international conference. After the presentation, people asked if we had involved supervisors to get a broader view. On the one hand, it's a good idea, but on the other hand, it would probably open up whole new direction of research. We also discussed whether something useful would come of it as the doctoral students themselves are saying that they do not talk to their supervisors about teaching.
xx.xx.2020	Perhaps it would be necessary to reformulate the first research question, not who PhD students have conversations with, but rather to focus on relationships. Relationship reflections – what are the relationships like and what happens when there are no relationships? For example, not being able to talk to the supervisor about teaching. Why is this important? Why are these conversations significant? What is learnt as a result of these conversations and a combination of the pedagogical course and the ensuing conversations?
xx.xx.2021	Some thoughts for the development of the central theme. Adapting to cultural norms with reference to a competency model? View the full role of a university teacher? For example, University of Helsinki, University of Arizona, City University London, Charles Darwin University – perhaps look at these competency models and what do they refer to? Or to look at studies of a research career path of doctoral students?
xx.xx.2021	Data analysis. We need to completely abandon the initial 'persona'-based presentation of results, as it is incompatible with the tradition of phenomenography. The data needs to be reanalysed through the phenomenon and presented in the form of "acceptance as..(what?)." It's a shame to give up personas, because readers found it interesting.

xx.xx.2022	Reporting the results of a phenomenographic study. With the help of Torgny's questions, we will further clarify the phenomenon. Thinking about agency – Torgny asks, what is our understanding/perception of agency? Phenomenon search questions to think about: Being accepted by or accepting the norms or Change things inside the norms Or changing norms...? Could the phenomenon be being accepted? In the subsections of the results part of the article, it is necessary to write more about the non-acceptance of the rules than the basis of the change, which leads to the attempt to change the teaching culture.
xx.xx.2022	We discussed with Torgny and Mari what is “disposition of the learner” (Eraut's concept). Torgny initially asked questions about what is meant by this. In my opinion, the disposition of the learner is important in terms of agency. In the discussion part of the article, I got the idea that it needs to be explained better.
xx.xx.2023	I went to Prof. James Groccia's consultation today, we discussed how to present the doctoral thesis visually. What is the central concept and how do the different parts of the work relate to each other? I presented him with the main results and showed him four figures. We discussed the work as a whole and I got ideas on how to visually represent it. I created the fifth drawing. Mari and I discussed it too. Seems to be the most representative.

REFERENCES

- Access to the Labour Market for Doctors Who Graduate from Catalan Universities. (2017). Agència per a la Qualitat del Sistema Universitari de Catalunya.
- Ajzen, I., & Fishbein, M. (2005). The Influence of Attitudes on Behavior. In D. Albaracín, B. Johnson, & M. Zanna, *The handbook of attitudes* (pp. 173–221). Lawrence Erlbaum Associates Publishers.
- Åkerlind, G. (2004). A new Dimension to Understanding University Teaching. *Teaching in Higher Education*, 9(3), 363–375.
- Åkerlind, G. S., Bowden, J., & Green, P. (2005). Learning to do phenomenography: A reflective discussion. In J. Bowden, & P. Green, *Doing Developmental Phenomenography* (pp. 74–100). RMIT Press.
- Alfred, M., Cherrstrom, C., Robison, P., & Friday, A. (2013). Transformative Learning Theory. In B. Irby, G. Brown, R. Lara-Alecio, & S. Jackson, *The Handbook of Educational Theories*. Charlotte, North Carolina: Information Age Publishing, Inc.
- ALLEA. (2017). *The European Code of Conduct for Research Integrity* (Revised ed.). Berlin.
- Allgood, S. Hoyt, G. & McGoldrick, K. M. (2018). Teacher training for PhD students and new faculty in economics. *The Journal of Economic Education*, 49(2), 209–219.
- Alumäe, T., Tilk, O., & Asadullah. (2018). Advanced Rich Transcription System for Estonian Speech. *Frontiers in Artificial Intelligence and Applications; Human Language Technologies – The Baltic Perspective*, 30.
- Alvesson, A., & Sköldberg, K. (2009). *Reflexive Methodology. New Vistas for Qualitative Methodology* (2 ed.). Sage Publications.
- Anderson, M., Ronning, E., DeVries, R., & Martinson, B. (2010). Extending the Meritonian Norms: Scientists' Subscription to Norms of Research. *Journal of Higher Education*, 81(3), 366–393.
- Andersson, R., Ahlberg, A., Diehl, A., & Price, L. (2013). Investigating the effects of academic development on novice teachers' conceptions of teaching in HE. *41st SEFI Conference*.
- Aškerc Veniger, K. (2016). University Teachers' Opinions about Higher Education Pedagogical Training Courses in Slovenia. *CEPS Journal*, 6(4), 141–158.
- Austin, A. E. (2010). Expectations and Experiences of Aspiring and Early Career Academics. In L. McAlpine, & G. G. S. Åkerlind (Eds.), *Becoming an Academic: International Perspectives*. Palgrave Macmillan.
- Ayala, A. T. (2013). *Future Engineering Professors' Conceptions of Learning and Teaching Engineering*. Graduate Theses and Dissertations. University of South Florida.
- Baker, V. L. (2020). The Professoriate in Liberal Arts Colleges: Early Career Faculty Socialization and Learning. In J. Weidman, & L. DeAngelo (Eds.), *Socialization in Higher Education and the Early Career* (pp. 93–112). Springer.
- Barlow, J., & Antoniou, M. (2007). Room for improvement: the experiences of new lecturers in higher education. *Innovations in Education and Teaching International*, 44(1), 67–77.
- Barney, C. E. (2019). The absence of teaching how to teach during the business management PhD programme: A call to action. *Innovations in Education and Teaching International*, 56(1), 121–124.
- Bechhofer, F., Elliott, B., & McCrone, D. (1984). Safety in numbers: on the use of multiple interviewers. *Sociology*, 18(1), 97–100.

- Becker, G. (1975/1964). *Human capital: A theoretical and empirical analysis, with special reference to education (Reissue of 1964 publication)*. Chicago: University of Chicago Press.
- Bergen, N., & Labonté, R. (2020). “Everything Is Perfect, and We Have No Problems”: Detecting and Limiting Social Desirability Bias in Qualitative Research. *Qualitative Health Research, 30*(5), 783–792.
- Berger, J. G. (2004). Dancing on the Threshold of Meaning. *Journal of Transformative Education, 2*(4), 336–351.
- Bergner, J., Ling, L. & , Tepalagui, N. K. (2015). Teacher Training for Ph.D. Students: Recommendations for Content and Deliver. *e-Journal of Business Education & Scholarship of Teaching 9*(1), 61–69.
- Beuving, J., & De Vries, G. (2015). *Doing Qualitative Research. The Craft of Naturalistic Inquiry*. Amsterdam University Press.
- Biggs, J., & Tang, C. (2011). *Teaching for Quality Learning at University* (4th ed.). McGraw-Hill.
- Bogler, R., & Kremer-Hayon, L. (1999). The Socialization of Faculty Members to University Culture and Norms. *Journal of Further and Higher Education, 23*(1), 31–40.
- Boyer, E. (1990). *Scholarship Reconsidered: Priorities for the Professoriate*. Carnegie Foundation for the Advancement of Teaching.
- Bradley, H., Curry, L., & Devers, K. (2007). Qualitative Data Analysis for Health Services Research: Developing Taxonomy, Themes, and Theory. *Health Services Research, 42*(4), 1758–1772.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*, 77–101.
- Bremner, N. (2021). The multiple meanings of ‘student-centred’ or ‘learner-centred’ education, and the case for a more flexible approach to defining it. *Comparative Education, 57*(2), 159–186.
- Brightman, H. J. (2009). The Need for Teaching Doctoral Students How to Teach. *International Journal of Doctoral Studies, 4*.
- Broussard, L. (2006). Understanding qualitative research: A school nurse perspective. *The Journal of School Nursing, 22*(4), 212–218.
- Brownell, S., & Tanner, K. (2012). Barriers to faculty pedagogical change: Lack of training, time, incentives, and tensions with professional identity. *CBE – Life Sciences Education, 11*, 339–346.
- Bryman, A. (1989). *Research Methods and Organization Studies* (1 ed.). Routledge.
- Bucharest Ministerial Communiqué. (2013). European Higher Education Area. https://www.ehea.info/media.ehea.info/file/2012_Bucharest/67/3/Bucharest_Communique_2012_610673.pdf
- Bueddefeld, J., & Van Winkle, C. M. (2018). The role of post-visit action resources in facilitating meaningful free-choice learning after a zoo visit. *Environmental Education Research, 24*(1), 97–110.
- Byrne, J., Jørgensen, T., & Loukkola, T. (2013). *Quality Assurance in Doctoral Education – results of the ARDE project*. Brussels: European University Association.
- Centre for Ethics. (2017). *Estonian Code of Conduct for Research Integrity*. Tartu: University of Tartu.
- Chalmers, D., & Gardiner, D. (2015). An evaluation framework for identifying the effectiveness and impact of academic teacher development programmes. *Studies in Educational Evaluation, 46*, 81–91.

- Chen, C. Y. (2015). A Study Showing Research Has Been Valued over Teaching in Higher Education. *Journal of the Scholarship of Teaching and Learning*, 15(3), 15–32.
- Colet, N.M.R. (2016). From content-centred to learning-centred approaches: shifting educational paradigm in higher education. *Journal of Educational Administration and History*, 49(1), 72–86.
- Council of Europe. (2021). Council Resolution on a strategic framework for European cooperation in education and training towards the European Education Area and beyond (2021–2030). (C 66/01). Retrieved from [https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32021G0226\(01\)&from=EN](https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32021G0226(01)&from=EN)
- Cranton, P. (2016). *Understanding and promoting transformative learning*. Taylor & Francis.
- Creswell, J. (2003). *Qualitative, Quantitative and Mixed Methods Approaches*. Sage Publications.
- Creswell, J., Hanson, W., Clark Plano, V., & Morales, A. (2007). Qualitative research designs: Selection and implementation. *The Counseling Psychologist*, 35(2), 236–264.
- Crosier, D., & Parveva, T. (2013). *The Bologna Process: Its impact on higher education development in Europe and beyond*. Paris, UNESCO: International Institute for Educational Planning.
- Crotty, M. (1998). *The foundations of social research*. London: Sage Publications.
- Dejene, Q. & Song, H. (2020). Conceptions of teaching & learning and teaching approach preference: Their change through preservice teacher education program. *Cogent Education*, 7(1).
- Denzin, N. K. (1978). *The research act: A theoretical introduction to sociological methods* (2nd ed.). New York: McGraw-Hill.
- Devlin, M. (2006). Challenging accepted wisdom about the place of conceptions of teaching in university teaching improvement. *International Journal of Teaching and Learning in Higher Education*, 2, 112–119.
- Doyle, T. (2023). *Helping Students Learn in a Learning-centred Environment: A Guide to Facilitating Learning in Higher Education*. Taylor & Francis.
- Edwards, J. D., Powers, J., Thompson, A. M. & Rutten-Turner, E. (2014). The Value of Teaching Preparation During Doctoral Studies: An Example of a Teaching Practicum. *Academic Leadership Journal in Student Research*, 2(2).
- Elken, M., & Wollscheid, S. (2016). The relationship between research and education: Typologies and indicators. A literature review (report No. 8). *Nordic Institute for Studies in Innovation, Research and Education*.
- Ellis, D. E. (2018). Changing the Lens: The Role of Reframing in Educational Development. *To Improve the Academy*, 37(1), 142–150.
- Ellström, P.-E. (2001). Integrating learning and work: conceptual issues and critical conditions. *Human Resource Development Quarterly*, 12(4), 421–35.
- Elo, S., & Kyngäs, H. (2008). The qualitative content analysis process. *Journal of Advanced Nursing*, 62(1), 107–115.
- Englund, C., Olofsson, A. D., & Price, L. (2018). The influence of sociocultural and structural contexts in academic change and development in higher education. *Higher Education*, 76(6), 1051–1069.
- Eraut, M. (2004). Informal learning in the workplace. *Studies in Continuing Education*, 24(2), 247–273.
- Eryaman, M., & Genc, S. (2010). Learning Theories. In C. Kridel, *Encyclopedia of Curriculum Studies* (pp. 354–537). SAGE Publications, Inc.

- Estonian Academy of Arts. (n.d.). Admissions. Retrieved from <https://www.artun.ee/en/admissions/doctoral/>
- Estonian Academy of Music and Theatre. (n.d.). Doctoral Studies Curricula and Information. Retrieved from <https://eamt.ee/en/departments/doctoral-studies/doctoral-studies-curricula-and-information/>
- Estonian Business School. (n.d.). Course Subjects Overview. Retrieved from <https://ebs.ee/phd/step-4.html>
- Estonian Ministry of Education and Research. (2022). Amendments to Act reforming doctoral studies receives approval of Riigikogu. Retrieved from <https://vana.hm.ee/en/news/amendments-act-reforming-doctoral-studies-receives-approval-riigikogu>
- Estonian University of Life Sciences. (2023). *Estonian University of Life Sciences is ranked at a very high 37th place in the world in the field of agriculture and forestry*. Retrieved from <https://www.emu.ee/en/about-the-university/news/uudis/2023/03/28/estonian-university-of-life-sciences-is-ranked-at-a-very-high-37th-place-in-the-world-in-the-field-of-agriculture-and-forestry/>
- Estonian University of Life Sciences. (n.d.). Doctoral School. Retrieved from <https://www.emu.ee/en/studies/doctoral-school/>
- European Commission. (2013). *Ethics for researchers*. Luxembourg: European Commission. Retrieved from https://ec.europa.eu/research/participants/data/ref/fp7/89888/ethics-for-researchers_en.pdf
- European University Association Council for Doctoral Education. (2010). *Salzburg recommendations European universities' achievements since 2005 in implementing the Salzburg principles*.
- Feldon, D., Peugh, J., Timmerman, B., Maher, M., Hurst, M., Strickland, D., Stiegelmeier, C. (2011). Graduate Students' Teaching Experiences Improve Their Methodological Research Skills. *Science*, 333, 1037–1039.
- Fetherston, B., & Kelly, R. (2007). Conflict resolution and transformative pedagogy: A grounded theory research project on learning in higher education. *Journal of Transformative Education*, 5, 262–285.
- Ford, S., & Reutter, L. (1990). Ethical dilemmas associated with small samples. *Journal of Advanced Nursing* 15, 187–191.
- Freiberg, T. (2015). A holistic, self-reflective perspective on victimization within higher education in Sweden. *Critical Studies in Education*, 56(3), 384–394.
- Gal, A., & Gan, D. (2020). Transformative Sustainability Education in Higher Education. *Journal of Transformative Education*, 18(4), 271–292.
- Gall, M., Gall, J.P. & Borg, W.R. (2007). *Educational Research: An Introduction*. 8th Edition. Pearson.
- Gardner, S., Jansujwicz, J., Hutchins, K., Cline, B., & Levesque, V. (2012). Interdisciplinary Doctoral Student Socialization. *International Journal of Doctoral Studies*, 7, 377–394.
- Gaskell, G. (2000). Individual and Group Interviewing. In M. Bauer, & G. Gaskell, *Qualitative Researching with Text, Image and Sound* (pp. 39–56). SAGE Publications Ltd.
- Gawlicz, K. (2022). “I felt as if I was becoming myself anew”: Transformative Learning Through Action Research Projects Carried out by Beginner Teachers. *Journal of Transformative Education*(1), 62–79.
- Geschwind, L., & Broström, A. (2015). Managing the teaching–research nexus: ideals and practice in research-oriented universities. *Higher Education Research & Development*, 34(1), 60–73.

- Geven, K., & Attard, A. (2012). Time for student-centred learning? In A. Curaj, P. Scott, L. Vlasceanu, & L. Wilson, *European higher education at the crossroads* (pp. 153–172). Pringer.
- Gibbs, G. (2013). Reflections on the changing nature of educational development. *International Journal for Academic Development*, 18(1), 4–14.
- Gibbs, G., & Coffey, M. (2004). The impact of training of university teachers on their teaching skills, their approach to teaching and the approach to learning of their students. *Active Learning in Higher Education*, 5, 87–100.
- Giddens, A. (1991). *Modernity and self-identity. Self and society in the late modern age*. Stanford, CA: Stanford University Press.
- Giddens, A. (2004). *The constitution of society*. Cambridge: Polity Press.
- Gillespie, K. J., & Robertson, D. L. (2010). *A guide to faculty development* (2nd ed.). San Francisco, CA: Jossey-Bass.
- Gillham, B. (2000). *Case Study Research Methods*. Bloomsbury Publishing Plc.
- Gillham, B. (2005). *Research Interviewing. The Range of Techniques*. Berkshire: Open University Press, McGraw-Hill Education.
- Ginns, P., Kitay, J., & Prosser, M. (2010). Transfer of academic staff learning in a research-intensive university. *Teaching in Higher Education*, 15(3), 235–246.
- Gizir, S., & Simsek, H. (2005). Communication in an academic context. *Higher Education*, 50(2), 197–221
- Gosling, D. (2008). *Educational development in the United Kingdom. Report for the Heads of Educational Development Group*. London: HEDG.
- Gover, A., Loukkola, T., & Peterbauer, H. (2019). *Student-centred learning: approaches to quality assurance*. European University Association.
- Greenhill, J., Richards, J. N., Mahoney, S., Campbell, N., & Walters, L. (2018). Transformative Learning in Medical Education: Context Matters, a South Australian Longitudinal Study. *Journal of Transformative Education*, 16(1), 58–75.
- Greer, D. A., Cathcart, A., & Neale, L. (2016). Helping doctoral students teach: transitioning to early career academia through cognitive apprenticeship. *Higher Education Research & Development*, 35(4), 712–726.
- Groccia, J. E. (1997). The Student as Customer versus the Student as Learner. *About Campus*, 2(2), 31–32.
- Guba, E., & Lincoln, Y. S. (1989). *Fourth Generation Evaluation*. Newbury Park.
- Gunn, A. (2018). The UK Teaching Excellence Framework (TEF): The Development of a New Transparency Tool. In A. Curaj, L. Deca, R. Pricopie, *European Higher Education Area: The Impact of Past and Future Policies* (pp. 505–526). Springer Open.
- Gunn, V., & Fisk, A. (2013). *Considering teaching excellence in higher education: 2007–2013 A literature review since the CHERI report 2007*. York: Higher Education Academy.
- Guskey, T. (2002). Professional Development and Teacher Change. *Teachers and Teaching: theory and practice*, 8(3/4), 381–91.
- Ha, P. L. (2014). The politics of naming: critiquing “learner-centred” and “teacher as facilitator” in English language and humanities classrooms. *Asia-Pacific Journal of Teacher Education*, 42(4), 392–405.
- Haigh, N. (2005). Everyday conversation as a context for professional learning and development. *International Journal for Academic Development*, 10(1), 3–16.
- Handelsman, J., Ebert-May, D., Beichner, R., Bruns, P., Chang, E., DeHaan, R., Wood, W. B. (2004). Scientific Teaching. *Science*, 30(5670), 521–522.

- Hasan, M. (2016). Positivism: To what extent does it aid our understanding of the contemporary social world? *Quality & Quantity*, 50(1), 317–325.
- Hasgall, A., & Pencoasu, A.-M. (2022). *Doctoral education in Europe: current developments and trends*. European University Association.
- Hasgall, A., Saenen, B., Borrell-Damian, L. V., Seeber, M., & Huisman, J. (2019). *Doctoral education in Europe today: approaches and institutional structures*. European University Association.
- Hennink, M., Hutter, I., & Bailey, A. (2020). *Qualitative Research Methods*. Sage Publications Ltd.
- Ho, A., Watkins, D., & Kelly, M. (2001). The conceptual change approach to improving teaching and learning: An evaluation of a Hong Kong staff development programme. *Higher Education*, 42, 143–169.
- Hughes, G., Baume, D., Silva-Fletcher, A., & Amrane-Cooper, L. (2023). Developing as a teacher: changing conceptions of teaching and the challenges of applying theory to practice. *Teaching in Higher Education*.
- Hutchinson, S., & Wilson, H. (2001). Grounded theory: The method. In P. Munhall (Ed.), *Nursing research: A qualitative perspective* (Vol. 3, pp. 209–245). Jones and Bartlett Publishers.
- Illeris, K. (2002). *The three dimensions of learning*. Roskilde University Press.
- Illeris, K. (2007). *How we learn: Learning and non-learning in school and beyond*. Routledge.
- Jenkins, A., Healey, M., & Zetter, R. (2007). Linking Teaching and Research in Disciplines and Departments. *The Higher Education Academy*.
- Jepsen, D. M., Varhegyi, M. M., & Edwards, D. (2012). Academics' attitudes towards PhD students' teaching: preparing research higher degree students for an academic career. *Journal of Higher Education Policy and Management*, 34(6), 629–645.
- Johnston, T.C., Keller, R.H. & S. Linnhoff, S. (2014). Mentoring in doctoral programs and preparedness of early career marketing educators. *Academy of Educational Leadership Journal*, 18(4), 15–22.
- Jones, L. (2007). *The Student-Centred Classroom*. Cambridge University Press.
- Jones, M. (2013). Issues in Doctoral Studies – Forty Years of Journal Discussion: Where have we been and where are we going? *International Journal of Doctoral Studies*, 8, 83–103.
- Jäppinen, A-M., Hämäläinen, H., Kettunen, T. & Piirainen, A. (2015). Patients' conceptions of preoperative physiotherapy education before hip arthroplasty. *European Journal of Physiotherapy*. 17, 148–157.
- Kaasila, R., Lutovac, S., Komulainen, J., & Maikkola, M. (2021). From fragmented toward relational academic teacher identity: the role of research-teaching nexus. *Higher Education*, 82, 583–598.
- Kahn, S. (2020). We Value Teaching Too Much to Keep Devaluing It. *College English*, 82(6), 591–611.
- Kanep, H. (2021). Ülikoolide majandamismudelitest, õppejõudude järelkasvust ja palkadest. In M. Surtop, *Kõrghariduse roll, kvaliteet ja rahastamise alused [The role, quality and basis for higher education financing]*. Riigikogu.
- Kegan, R. (2009). What “form” transforms? In K. Illeris (Ed.), *Contemporary Theories of Learning* (pp. 35–52). London and New York: Routledge.
- Kember, D. (2009). Promoting Student-Centred Forms of Learning Across an Entire University. *Higher Education*, 58(1), 1–13.

- Kember, D., & Kwan, K. (2000). Lecturer's approaches to teaching and their relationship to conceptions of good teaching. *Instructional Science*, 28(5), 469–490.
- Kindsiko, E., Vadi, M., Täks, V., Loite, K., & Kurri, K. (2017). *Eesti doktorite karjääritee ja seda mõjutavad tegurid [The career path of Estonian PhDs and the factors affecting it]*. Tartu: Tartu Ülikool.
- Knight, P. (2002). *Being a teacher in higher education*. Maidenhead, UK: Society for Research into Higher Education & Open University Press.
- Knight, P., Tait, J., & Yorke, M. (2006). The professional learning of teachers in higher education. *Studies in Higher Education*, 31(03), 319–339.
- Kutsekoda. (2008). Estonian Qualifications Framework level descriptions. Retrieved April 26, 2023, from https://www.kutsekoda.ee/wp-content/uploads/2019/kutsekoda/EstQF_level-descriptions.pdf
- Kvale, S. (1996). *Interviews. An introduction to qualitative research interviewing*. CA: Sage.
- Kyndt, E., Gijbels, D., Grosemans, I., & Donche, V. (2016). Teachers' Everyday Professional Development: Mapping Informal Learning Activities, Antecedents, and Learning Outcomes. *Review of Educational Research*, 20(10), 1–40.
- Larsson, J., & Holmström, I. (2007). Phenomenographic or phenomenological analysis: does it matter? *International Journal of Qualitative Studies on Health and Well-being*, 2(1), 55–64.
- Lave, J., & Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity*. Cambridge University Press.
- Leijen, Ä., Pedaste, M., & Lepp, L. (2020). Teacher Agency Following the Ecological Model. *British Journal of Educational of Educational Studies*, 68(3), 295–310.
- Ley, T., Cook, J., Dennerlein, S., Kravcik, M., Kunzmann, C., Pata, K., Purma, J., Sandars, J., Santos, P., Schmidt, A. Al-Smadi, M., & Trattner, C. (2014). Scaling informal learning at the workplace: A model and four designs from a large-scale design-based research effort. *British Journal of Educational Technology*, 45(6), 1036–1048.
- Lietz, C.A., Langer, C.L., & Furman, R. (2006). Establishing trustworthiness in qualitative research in social work: implications from a study regarding spirituality. *Qualitative Social Work*, 5, 441–458.
- Lincoln, Y., & Guba, E. (1985). *Naturalistic Inquiry*. Thousand Oaks, CA: Sage.
- Lincoln, Y., & Guba, E. (2013). *The Constructivist Credo*. London and New York: Routledge.
- Mabry, L. (2008). Case Study in Social Research. In P. B. Alasuutari, & J. Brannen (Eds.), *The SAGE Handbook of Social Research Methods* (pp. 214–226). SAGE Publications Ltd.
- Mack, L. (2010). The Philosophical Underpinnings of Educational Research. *Polyglossia*, 19.
- MacPhail, A., Ulvik, M., Guberman, A., Czerniawski, G., Oolbekkink-Marchandfand, H., & Bain, Y. (2019). The professional development of higher education-based teacher educators: needs and realities. *Professional Development in Education*, 45(5), 848–861.
- Magnusson, G. & Rytzler, J. (2022) *Towards a Pedagogy of Higher Education. The Bologna Process, Didaktik and Teaching*. Routledge.
- Marsh, H. W., & Hattie, J. (2002). The Relation Between Research Productivity and Teaching Effectiveness: Complementary, Antagonistic, or Independent Constructs? *The Journal of Higher Education*. 73 (5), 603–641.

- Marshall, M. N. (1996). Sampling for Qualitative Research. *Family Practice*, 13(6), 522–525.
- Martin, J., & Siehl, C. (1983). Organizational Culture and Counter-Culture: An Uneasy Symbiosis. *Organizational Dynamics*, 12, 52–64.
- Marton, F. (1980). Phenomenography – describing conceptions of the world around us. *Instructional Science*, 10, 177–200.
- Marton, F. (1986). Phenomenography – A research approach to investigating different understandings of reality. *Journal of Thought* 21(3), 28–49.
- Marton, F., & Booth, S. (1997). *Learning and awareness*. New Jersey: Lawrence Erlbaum Associates.
- Maslow, A. H. (1970). Self-Actualizing People: A Study of Psychological Health. In A. H. Maslow (Ed.), *Motivation and Personality* (2 ed., pp. 149–180). Harper & Row.
- Matteson, S., & Lincoln, Y. (2009). Using Multiple Interviewers in Qualitative Research Studies. *Qualitative Inquiry*, 15(4), 659–674.
- Mattisen, H. (2021). Kõrghariduse kvaliteet Eestis 2021. In: M. Sutrop, *Kõrghariduse roll, kvaliteet ja rahastamise alused*. [The role, quality and basis of financing of higher education] https://haka.ee/wp-content/uploads/RK_korghariduse_toetusruhma_raport.pdf
- Maxwell, J. A. (2013). *Qualitative research design: An interactive approach* (3rd ed.). Thousand Oaks, CA: Sage.
- McAlpine, L., & Åkerlind, G. (2010). *Becoming an Academic: International Perspectives*. Palgrave Macmillan.
- McCarthy, K., & McNamara, D. (2022). Knowledge: a fundamental asset. In R. Tierney, F. Rizvi, & K. Ercikan (Eds.), *International Encyclopedia of Education* (4th ed., pp. 209–218).
- McChesney, K., & Aldridge, J. (2021). What gets in the way? A new conceptual model for the trajectory from teacher professional development to impact. *Professional Development in Education*, 47(5), 834–852.
- McGoldrick, K., Hoyt, G. & Colander, D. (2010). The professional development of graduate students for teaching activities: The students’ perspective. *Journal of Economic Education*, 41(2). 194–201.
- McCormack, C. & Kennelly, R. (2011). ‘We must get together and really talk ...’. Connection, engagement and safety sustain learning and teaching. *Reflective Practice: International and Multidisciplinary Perspectives*, 12(4), 515–531.
- Merriam, S., & Tisdell, E. J. (2015). *Qualitative Research: A Guide to Design and Implementation*. John Wiley & Sons, Inc.
- Merton, R. K. (1973 [1942]). The Normative Structure of Science. In N. W. Storer (Ed.), *The Sociology of Science. Theoretical and Empirical Investigations* (pp. 267–278). Chicago and London: The University of Chicago Press.
- Merton, R. K., Reader, G., & Kendall, P. (1957). *The Student Physician*. Cambridge, MA: Harvard University Press.
- Mezirow, J. (1991). *Transformative dimensions in adult learning*. San Francisco: Jossey-Bass.
- Mezirow, J. (1994). Understanding transformation theory. *Adult Education Quarterly*, 44(4), 222–232.
- Mezirow, J. (1998). On critical reflection. *Adult Learning Quarterly*, 48(3), 185–198.
- Mezirow, J. (2009). An Overview on transformative learning. In K. Illeris (Ed.), *Contemporary Theories of Learning* (pp. 90–105). London and New York: Routledge.
- Mezirow, J., & Associates. (2000). *Learning as transformation: Critical perspectives on a theory in progress*. New York: John Wiley.

- Miles, M., & Huberman, A. M. (1994). *Qualitative Data Analysis: An Expanded Sourcebook* (2nd ed.). Thousand Oaks, CA: Sage.
- Mimirinis, M., & Ahlberg, K. (2020). Variation in education doctoral students' conceptions of university teaching. *British Educational Research Journal*, 47(3), 557–578.
- Mitroff, I. I. (1974). Norms and Counter-Norms in a Select Group of the Apollo Moon Scientists: A Case Study of the Ambivalence of Scientists. *American Sociological Review*, 39(4), 579–595.
- Mladenovici, V., & Ilie, M. D. (2023). A cross-lagged panel model analysis between academics' conceptions of teaching and their teaching approaches. *Studies in Higher Education*, 48(11), 1767–1780.
- Morrell-Scott, N. (2019). The perceptions of acceptance by new academics to a Higher Education Institution. *Journal of Further and Higher Education*, 43(3), 305–320.
- Morrow, S. L. (2005). Quality and Trustworthiness in Qualitative Research in Counseling Psychology. *Journal of Counselling Psychology*, 52(2), 250–260.
- Moshman, D. (1982). Exogenous endogenous and dialectical constructivism. *Developmental Review*, 2, 371 – 384.
- Murtonen, M., & Lappalainen, M. (2013). Pedagogical education for university teachers in Finland. *Revista de Docencia Universitaria. REDU. Número monográfico dedicado a Formación docente del profesorado universitario*, 11(3), 65–72.
- Mycock, A. (2007). 'Where's the real lecturer?': the experiences of doctoral educators in the UK. *European Political Science* 6(2), 208–218.
- Nevgi, A., & Löfström, E. (2015). The development of academics' teacher identity: Enhancing reflection and task perception through a university teacher development programme. *Studies in Educational Evaluation*, 46, 53–60.
- Noben, I., Maulana, R., Deinum, J., & Hofman, W. (2021). Measuring university teachers' teaching quality: a Rasch modelling approach. *Learning Environments Research*, 24, 87–107.
- Norton, L., Aiyegbayo, O. , Harrington, K. , Elander, J., & Reddy, P. (2010). New lecturers' beliefs about learning, teaching and assessment in higher education: the role of the PGCLTHE programme. *Innovations in Education and Teaching International*, 47(4), 345–356.
- Nygaard, C., & Holtham, H. (2008). The Need for Learning-Centred Higher Education. In C. Nygaard, & H. Holtham (Eds.), *Understanding Learning-Centred Higher Education*. Copenhagen Business School Press.
- O'Donnell, A. (2012). Constructivism. In K. Harris, S. Graham, & T. Urdan (Eds.), *APA educational psychology handbook volume 1: Theories, constructs, and critical issues* (pp. 61–84). Washington, DC: American Psychological Association.
- O'Leary, M. & Wood, P. (2019). Reimagining teaching excellence: why collaboration, rather than competition, holds the key to improving teaching and learning in higher education. *Educational Review*, 71(1), 122–139.
- Olsson, T. & Roxå, T. (2013). Assessing and rewarding excellent academic teachers for the benefit of an organization. *European Journal of Higher Education*, 3, 40–61.
- OSCD. (2020). *Education at a Glance 2020. OECD Indicators*. OECD Publishing, Paris, <https://doi.org/10.1787/69096873-en>
- Palinkas, L. A., Horwitz, S. M., G. C., Wisdom, J. P., Duan, N., & Hoagwood, K. (2013). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *Administration and Policy in Mental Health and Mental Health and Mental Health Services Research*, 42, 533–544.

- Paris Communiqué. (2018). Paris, France. Retrieved from http://ehea.info/media.ehea.info/file/2018_Paris/77/1/EHEAParis2018_Communique_final_952771.pdf
- Parsons, D., Hill, I., Holland, J., & Willis, D. (2012). *Impact of teaching development programmes in higher education*. Higher Education Academy, UK.
- Pataraiia, N., Margaryan, A., Falconer, I., & Littlejohn, A. (2015). How and what do academics learn through their personal networks. *Journal of Further and Higher Education*, 39(3), 336–357.
- Patton, M.Q. (1990). *Qualitative Evaluation and Research Methods* (2nd ed.). Sage Publications.
- Patton, M.Q. (2002). *Qualitative Research & Evaluation Methods* (3 ed.). Sage Publications.
- Petkutė, R. (2022). *The instrumentalisation of academic lifeworlds, knowledge, and education: Lithuanian academics' responses to the European higher education policy of curriculum restructuring*. Doctoral dissertation. Tallinn University.
- Phillips, D. C. (1995). The good, the bad, and the ugly: The many faces of constructivism. *Educational researcher*, 24 (7), 5–12.
- Pilarska, J. (2021). The Constructivist Paradigm and Phenomenological Qualitative Research Design. In A. Pabel, J. Pryce, & A. Anderson (Eds.), *Research Paradigm Considerations for Emerging Scholars*. Channel View Publications.
- Pillow, W. S. (2003). Confession, catharsis, or cure? Rethinking the uses of reflexivity as methodological power in qualitative research. *International Journal of Qualitative Studies in Education*, 16, 175–196.
- Polit, D., & Beck, C. (2004). *Nursing Research. Principles and Methods*. Philadelphia, PA: Lippincott Williams & Wilkins.
- Poole, G., Iqbal, I., & Verwoord, R. (2019). Small significant networks as birds of a feather. *International Journal for Academic Development*, 24(1), 61–72.
- Postareff, L., & Lindblom-Ylänne, S. (2008). Variation in teachers' descriptions of teaching: Broadening the understanding of teaching in higher education. *Learning and Instruction*, 18, 109–120.
- Postareff, L., Lindblom-Ylänne, S., & Nevgi, A. (2008). A follow-up study of the effect of pedagogical training on teaching in higher education. *Higher Education* 56, 29–43.
- Priestley, M., Biesta, G. J., & Robinson, S. (2015). *Teacher Agency: An Ecological Approach*. London: Bloomsbury Academic.
- Prosser, M., & Trigwell, K. (1999). *Understanding learning and teaching: the experience in higher education*. Buckingham: Open University Press.
- Pyörälä, E., Hirsto, L., Toom, A., Myyry, L., & Lindblom-Ylänne, S. (2015). Significant networks and meaningful conversations observed in the first-round applicants for the Teachers' Academy at a research intensive university. *International Journal for Academic Development*, 20(2), 150–162.
- Rao, N., Hosein, A., & Raaper, R. (2021). Doctoral students navigating the borderlands of academic teaching in an era of precarity. *Teaching in Higher Education*, 26(3), 454–470.
- Read, B. L. (2018). Serial Interviews: When and Why to Talk to Someone More Than Once. *International Journal of Qualitative Methods*, 17(1).
- Redman-MacLaren, M. L., Api, U. K., Darius, M., Tommbe, R., Mafile'o, T. A., & MacLaren, D. J. (2014). Co-interviewing across gender and culture: expanding qualitative research methods in Melanesia. *BMC Public Health*, 14(1), 1–7.
- Remmik, M. (2013). *Novice University Teachers' professional development and learning as a teacher*. Doctoral dissertation. University of Tartu Press.

- Remmik, M., Karm, M., Haamer, A., & Lepp, L. (2011). Early-career academics' learning in academic communities. *International Journal for Academic Development*, 16, 187–199.
- Rhoads, R. A., & Tierney, W. G. (1992). *Cultural Leadership and the Search for Community* (Vol. 78). National Center on Postsecondary Teaching, Learning, and Assessment.
- Riigikogu. (2019). Higher Education Act. Retrieved April 26, 2023, from <https://www.riigiteataja.ee/en/eli/ee/Riigikogu/act/501072022002/consolide>
- Rogers, C. R. (1969). *Freedom to Learn*. Columbus, OH: Charles E. Merrill.
- Rogers, C. R. (1983). *Freedom to learn for the 80s*. Columbus, OH: Charles E. Merrill.
- Rogoff, B. (1990). *Apprenticeship in thinking: Cognitive development in social context*. Oxford, England: Oxford University Press.
- Rosenblatt, P. C. (2012). One interviewer versus several: Modernist and postmodernist perspectives in qualitative family interviewing. *Journal of Family Theory & Review*, 4(2), 96–104.
- Roxå, T., & Mårtensson, K. (2009). Significant conversations and significant networks – exploring the backstage of the teaching arena. *Studies in Higher Education*, 34(5), 547–559.
- Roxå, T., & Mårtensson, K. (2015). Microcultures and informal learning: a heuristic guiding analysis of conditions for informal learning in local higher education workplaces. *International Journal for Academic Development*, 20(2), 193–205.
- Roxå, T., Ahmad, A., Barrington, J., Van Maren, J., & Cassidy, R. (2022). Reconceptualising student ratings of teaching to support quality discourse on student learning: A systems perspective. *Higher Education*, 83, 35–55.
- Russell, J. A. (2015). Rolling With the Punches: Examining the Socialization Experiences of Kinesiology Doctoral Students. *Research Quarterly for Exercise and Sport*, 86(2), 140–151.
- Sagy, O., Hod, Y., & Kali, Y. (2019). Teaching and learning cultures in higher education: a mismatch in conceptions. *Higher Education Research & Development*, 38(4), 849–863.
- Saldaña, J. (2011). *Fundamentals of Qualitative Research*. Oxford University Press.
- Saroyan, A., & Trigwell, K. (2015). Higher Education Teachers' Professional Learning: Process and Outcome. *Studies in Educational Evaluation*, 46, 92–101.
- Shortlidge, E.E. and Eddy, S.L. (2018). The trade-off between graduate student research and teaching: A myth? *PLoS ONE* 13(6): e0199576
- Schunk, D. H. (2016). *Learning Theories. An Educational Perspective* (Vol. 7th). Pearson.
- Schwartz-Shea, P., & Yanow, D. (2013). *Interpretive Research Design*. New York and London: Routledge.
- Schweisfurth, M. (2013). *Learner-centred Education in International Perspective: Whose Pedagogy for Whose Development?* Roudledge.
- Schön, D. (1983). *The reflective practitioner. How practitioners think in action*. London: Temple Smith.
- Science Europe. (2023). *Science Europe Recommendations on Research Recognition Systems: Recognising What We Value*. Retrieved from <https://scienceeurope.org/media/ra1dxxjf/202304-recognising-what-we-value.pdf>
- Selander, S., Säljö, R., & Wulf, C. (2021). The Social Significance of Learning. In G. Kress, S. Selander, R. Säljö, & C. Wulf (Eds.), *Learning as Social Practice: Beyond Education as an Individual Enterprise*. Routledge.

- Senge, P. (1990). *The fifth dimension: the art and practice of the learning organization*. New York: Doubleday.
- Sin, C. (2015). Teaching and learning: A journey from the margins to the core in European higher education policy. In A. Curaj, L. Matei, R. Pricopie, J. Salmi, & P. Scott (Eds.), *The European higher education area: Between critical reflections and future policies* (pp. 325–341). Dordrecht: Springer
- Simona, E., & Pleschová, G. (2021). PhD students, significant others, and pedagogical conversations. The importance of trusting relationships for academic development. *International Journal for Academic Development*, 26(3), 279–291.
- Snyder, C. (2008). Grabbing Hold of a Moving Target. *Journal of Transformative Education*, 6(3), 59–181.
- Standard of Higher Education. (2019). Riigikogu.
- Stes, A., Min-Leliveld, M., Gijbels, D., & van Petegem, P. (2010). The impact of instructional development in higher education: The state-of-the-art of the research. *Educational Research Review*, 5(1), 25–49.
- Sword, W. (1999). Accounting for presence of self: reflections on doing qualitative research. *Qualitative Health Research*, 9, 270–278.
- Tallinn Technical University. (n.d.). Doktoritõppe programmid [PhD programmes]. Retrieved from <https://taltech.ee/doktorandile/doktorioppest#p61821>
- Tallinn University. (n.d.). Programmes. Retrieved from <https://www.tlu.ee/en/erialad?f%5B0%5D=degree%3A23>
- Tallinn University of Technology. (2019). *TalTech included in the prestigious QS rankings with three subjects*. Retrieved from <https://taltech.ee/en/news/taltech-included-prestigious-qs-rankings-three-new-subjects>
- Tallinn University of Technology. (2023). *Academic career management*. Retrieved from https://oigusaktid.taltech.ee/wp-content/uploads/2021/05/TT_Akadeemilise_karjaari_korraldus-EN-3.pdf
- Taylor, E. W. (2000). Fostering Mezirow's Transformative Learning Theory In The Adult Education Classroom: A Critical Review. *CJSAE/RCEEA*, 14(2).
- Taylor, E. W., & Cranton, P. (2012). *The Handbook of Transformative Learning: Theory, Research, and Practice*. John Wiley & Sons.
- Terry, G., Hayfield, N., Clarke, V., & Braun, V. (2017). Thematic Analysis. In C. Willig, & W. Stainton Rogers, *The SAGE Handbook of Qualitative Research in Psychology* (2 ed., pp. 17–37).
- Thomas, G. (2016). *How to do your case study?* (2nd ed.). Sage.
- Thomson, K. E. (2015). Informal conversations about teaching and their relationship to a formal development program: learning opportunities for novice and mid-career academics. *International Journal for Academic Development*, 20(2), 137–149.
- Thomson, K. E., & Trigwell, K. R. (2018). The role of informal conversations in developing university teaching? *Studies in Higher Education*, 43(9), 1536–1547.
- Tierney, W., & Rhoads, R. (1993). *Enhancing promotion, tenure and beyond: Faculty socialization as a cultural process*. The George Washington University.
- Tight, M. (2016). Phenomenography: the development and application of an innovative research design in higher education research. *International Journal of Social Research Methodology*, 19(3), 319–338.
- Timans, R., Wouters, P., & Heilbron, J. (2019). Mixed methods research: What it is and what it could be. *Theory and Society*, 48(2), 193–216.

- Trowler, P., & Cooper, A. (2002). Teaching and Learning Regimes: Implicit theories and recurrent practices in the enhancement of teaching and learning through educational development programmes. *Higher Education Research & Development*, 21(3), 221–240.
- University of Tartu. (2023a). *Job descriptions of academic staff*.
- University of Tartu. (2023b). *University of Tartu ranked in the top 400 in QS World University Rankings using a new methodology*. Retrieved from <https://ut.ee/en/content/university-tartu-ranked-top-400-qs-world-university-rankings-using-new-methodology>
- University of Tartu. (n.d.). Doctoral Programmes. Retrieved from <https://ut.ee/en/doctoral-programmes>
- Van Waes, S., Van den Bossche, P., Moolenaar, N. M., De Maeyer, S. & Van Petegem, P. (2015). Know-who? Linking faculty's networks to stages of instructional development. *Higher Education*, 70, 807–826.
- Velardo, S., & Elliott, S. (2021). Co-Interviewing in Qualitative Social Research: Prospects, Merits and Considerations. *International Journal of Qualitative Methods*, 20, 1–7.
- Vermunt, J. D., Vrikkki, M., Warwick, P., & Mercer, N. (2017). Connecting teacher identity formation to patterns in teacher learning. In D. J. Clandinin, & J. Husu (Eds.), *The Sage handbook of research on teacher education* (pp. 143–159). Los Angeles, CA: Sage Inc.
- Vilppu, H., Södervik, I., Postareff, L., & Murtonen, M. (2019). The effect of short online pedagogical training on university teachers' interpretations of teaching–learning situations. *Instructional Science*, 47, 679–709.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.
- Ödalen, J. B., & Fogelgren, M. (2019). Teaching university teachers to become better teachers: The effects of pedagogical training courses at six Swedish universities. *Higher Education Research & Development*, 38(2), 339–353.
- Weidman, J., & DeAngelo, L. (2020). Toward a 21st Century Socialization Model of Higher Education's Impact on Students. In J. Weidman, & L. DeAngelo (Eds.), *Socialization in Higher Education and the Early Career* (pp. 311–325). Springer Nature Switzerland AG.
- Weidman, J., Twale, D., & Stein, E. (2001). Socialization of graduate and professional students in higher education: A perilous passage? (*ASHE-ERIC Higher Education Report*, 28(3)). San Fransisco: Jossey-Bass. Retrieved from <https://files.eric.ed.gov/fulltext/ED457710.pdf>
- Wenger-Trayner, E., Wenger-Trayner, B., Reid, P., & Bruderlein, C. (2022). *Communities of Practice within and across organizations*. Social Learning Lab.
- Williams, J. (2016). A critical exploration of changing definitions of public good in relation to higher education. *Studies in Higher Education*, 41(4), 619–630.
- Zoltowski, C., Fila, B., Nicholas, D. and Dringenberg, E. (2017). A Qualitative Approach to Understanding Variations in Experiences and its Relationship to Learning: An Introduction to Phenomenography. *2017 IEEE Frontiers in Education Conference (FIE) Frontiers in Education Conference (FIE)*:1–3 Oct, 2017.

SUMMARY IN ESTONIAN

Doktorantide arvamused õpetama õppimisest kõrghariduse kontekstis

Euroopa Nõukogu (2021) resolutsioonis tuuakse esile, et Euroopa kodanikele on haridus ja elukestev õpe nende individuaalse ja professionaalse arengu jaoks üliolulised ning selle keskmes on kõikidel tasanditel haridustöötajad ja haridusjuhid. Pariisi kommünikees (Paris Communique, 2018) rõhutasid Euroopa haridusministrid vajadust „arendada ja rakendada täielikult õppijakeskset õpet” kõrghariduses (European Higher Education Area, 2018, lk 3). Kuigi poliitikadokumendid viitavad sellele, et õpetamise kvaliteeti peetakse innovatsiooni edendamisel ja ühiskonna ümberkujundamisel oluliseks, kipuvad kõrgkoolid ise olema õpetamisoskuste arendamisest ja toetamisest vähem huvitatud (MacPhail, 2019).

Doktoriõppes on õpe on suunatud eelkõige teadustööle ning enamik ajast kulub selleks vajalike oskuste edendamisele. Samas on üha selgemaks muutumas vajadus õppida õpetamist ja arendada õpetamisoskusi. Varasemad uuringud näitavad, et doktoriõpingud lõpetanute karjäär jätkub nii ülikoolides kui ka väljaspool akadeemilist sfääri (Byrne *et al.*, 2013; Kindsiko *et al.*, 2017). Eesti doktorantide karjäärivalikuid käsitlevast uuringust selgus, et peale ülikoolis töötamise oli levinud töötamine konsultandina ja/või täiskasvanute koolitajana mitmes valdkonnas, nagu näiteks humanitaar- ja kunstiteadused, sotsiaalteadused, põllumajandus ja veterinaaria, aga ka tehnoloogia (Kindsiko *et al.*, 2017). Sarnased tulemused selgusid ka Kataloonia ülikoolide doktorantide uuringust (Access to ..., 2017). Konsultandina töötamine nõuab selleks, et keerukaid erialaspetsiifilisi mõisteid mittespetsialistidele selgitada, õpetamisega sarnaseid oskusi. Ka täiskasvanute koolitajad vajavad tõhusaks tööks õpetamisoskusi. Seetõttu võib õpetamisoskust vaadelda ülekantava oskusena, mis on vajalik paljudele doktorantidele ja doktorikraadi omandanutele, kes otsustavad töötada kas akadeemilises keskkonnas või väljaspool seda. Üldiselt peetakse õpetamisoskusi doktorantide tulevast karjääriedu soodustavaks teguriks (Edwards *et al.*, 2014).

Samas on mitmetes uuringutes leitud, et doktorantidel puudub süstemaatiline ettevalmistus õpetamiseks (Barney, 2019; Bergner *et al.*, 2015; Jepsen *et al.*, 2012; McGoldrick *et al.*, 2010; Mycock, 2007; Rao *et al.*, 2021). Doktorantide vähene ettevalmistus õpetamiseks võib olla seotud õpetamise väiksema tajutud väärtusega võrreldes teadustööga ülikoolides, kuna ülikoolides tehtavat teadustööd hinnatakse ja tunnustatakse rohkem kui õpetamist (Chen, 2015; Kahn, 2020; Marsh & Hattie, 2002; Norton *et al.*, 2010). Lisaks võib see tuleneda ülikoolis levinud hoiakutest. Jepseni jt (2012) läbiviidud uuringust selgus, et 65% doktorantide juhendajatest soovisid, et nende juhendatavad keskendusid oma uurimistööle, mitte ei osaleks õpetamisega seotud kursustel.

Vaatamata tõdemusele, et doktorandid vajavad ettevalmistust mitte ainult teadustööks, vaid ka õpetamiseks, ei ole teema, mis käsitleb doktorantide õpetamise õppimist, teaduskirjanduses palju tähelepanu pälvinud (Barney, 2019; Bergner *et al.*, 2015; Jepsen *et al.*, 2012; McGoldrick *et al.*, 2010; Mycock, 2007;

Rao *et al.*, 2021). Need vähesed varasemad uuringud, mis on käsitletud doktorante ja õpetamist (Ayala, 2013; Mimirinis & Ahlberg, 2020; Remmik, 2013), on näidanud, et doktorantide õpetamisarusaad on erinevad: need võivad olla sisu- ehk õpetajakesksed (õpetamises keskendutakse sellele, mida õpetaja teeb, eesmärk on edastada teavet üliõpilastele) või õppija- ehk õppimiskesksed (õpetamist nähakse kui õppijate toetamist ja õppijad on aktiivsed osalejad protsessis) (Postareff & Lindblom-Ylänne, 2008). Samas on vähe teada, kuidas õpetamisarusaad on kujunenud või kuidas doktorandid kõrghariduse kontekstis õpetama õpivad. Varasemad uuringud on kutsunud üles uurima sügavamalt õpetamiskonteksti ja selle mõju doktorantide õpetamisarusaadadele (Ayala, 2013). Lisaks on edasistes uuringutes soovitatud keskenduda doktorantide teadmiste konstrueerimise protsessile ja sellele, kuidas erinevad sotsiaalsed, arengu- ja juhendamisprotsesside tegurid võivad seda kujundada (Schunk, 2016). Sellest lähtuvalt on doktoritöö eesmärk välja selgitada doktorantide arvamused kuidas erinevad õppimisviisid nende õpetamise õppimist kujundavad. Täpsemalt vaadeldakse, kuidas informaalset vestlused õpetamisest, ülikooli õpetamiskultuuri normide omaksvõtmine ja ülikooli kogukonna poolt omaksvõtmine ning õpetamisarusaadade muutumine õpikeskseks kujundavad doktorantide õpetama õppimist kõrghariduse kontekstis. Lähtuvalt uurimistö eesmärgist püstitati kolm uurimisküsimust, mis kõik puudutavad kõrghariduse konteksti.

1. Millised on doktorantide arvamused kuidas toetab formaalhariduse vormis läbitud pedagoogiline kursus informaalset vestlust, mis aitavad kaasa õpetamise õppimisele?
2. Kuidas kujundab ülikooli kogukonnas aktsepteerimise kogemus doktorantide arvates õpetamise õppimist?
3. Kuidas kujundavad transformatiivse õppimise protsess ja selle kontekst doktorantide arvates õpetama õppimist ning õpetamisarusaadade ja -praktika muutumist õppimiskesksesks?

Uurimisküsimustele vastamiseks koguti empiirilised andmed poolstruktureeritud intervjuude vormis 25 doktorandilt neljast Eesti ülikoolist. Esimesele uurimisküsimusele vastab artikkel I, teisele artikkel II ja kolmandale artikkel III. Uuringu metodoloogiline raamistik kasutas kvalitatiivset lähenemisviisi, täpsemalt temaatilist analüüsi, fenomenograafiat ja võrdlevat mitme juhtumi uuringut, selgitamaks välja, kuidas doktorandid õpetama õppimist kõrghariduse kontekstis kirjeldavad. Juhtumiuuringus oli vaatluse all neli juhtumit. Juhtumid valiti transformatiivse õppimise teoreetiliste tunnuste alusel, mida sai eristada selle põhjal, mil määral õppimiskeskne lähenemine oli uuringus osalenu enda sõnul omaks võetud. Valiti kaks juhtumit, kus transformatiivne õppimine oli täiel määral toimunud ja õppimiskesksed põhimõtted olid täielikult omaks võetud. Ühes oli protsess keskmises arengufaasis ja viimases valitud juhtumis algfaasis. Otsus, mil määral õppimiskesksus omaks oli võetud, tehti osalejate kirjelduste ja ütluste põhjal (nende õpetamisarusaadade ja õppimiskeskse lähenemisviisi põhiprint-

siipide rakendamise oma õpetamises), milles oli ära tuntav „pigem epistemoloogiline muutus, mitte lihtsalt muutus käitumisrepertuaaris või teadmiste mahu või määra suurenemine“ (Kegan, 2009, lk 41).

Selle doktoritöö kokkuvõtavad tulemused annavad ülevaate doktorantide õpetama õppimisest kõrghariduse kontekstis. Tulemuste põhjal on uuringus osalenud doktorantide sõnul formaalne ja informaalne õpe läbi põimunud ning õppimiskeskuse isiklik kogemine kõrgkoolis õpetamise õppimisel hädavajalik. Kontekst mängib rolli doktorantide sotsialiseerimisel ja aktsepteerimisel, mis hõlbustab või ka takistab kõrghariduses õpetamise õppimist. Doktorantide õpetamise õppimisel on otsustava tähtsusega tegur kriitiline refleksioon ning isiklikust õpetamiskogemusest tulenev tajutud ebakõla on doktorantide sõnul ajendiks transformatiivsele õppimisele, mis viis õppimiskeskuse omaksvõtmiseni.

Selle töö tulemused ühtivad suures osas varem rahvusvaheliselt avaldatutega. Vastusena esimesele uurimisküsimusele „**Millised on doktorantide arvamused kuidas toetab formaalhariduse vormis läbitud pedagoogiline kursus informaalset vestlust, mis aitavad kaasa õpetamise õppimisele?**“ selgus, et uuringus osalenud doktorandid pidasid õpetamise väärtust rõhutava ja õppimiskesksele lähenemisele keskendunud pedagoogilise kursuse läbimist toetavaks ja tähtsaks õpetamise õppimiseni viivate vestluste kujundamisel. Üks oluline aspekt pedagoogilise kursuse juures oli teadvustada õpetamisest rääkimise olulisust. Pedagoogilisest kursusest lähtuv teine oluline tulemus, mis kujundas mitteametlikke vestlusi ja aitas kaasa õpetamise õppimisele, oli võimalus arutada õpetamise üle erinevate inimestega – kaasdoktorantidega teistest valdkondadest, aga ka kursust korraldanud õpetamisoskuste konsultantidega. Need mitmekesised vestlused andsid võimaluse saada nii teoreetilisi teadmisi kui ka praktilisi ideid õppetööks. Järgmine oluline tulemus kõnealuse pedagoogilise kursuse kohta oli õpetamise kohta teadmiste jagamine. Osalejate sõnul pakkus pedagoogiline kursus õpetamise kohta ohtralt uusi teadmisi, mida paljud doktorandid soovisid pärast kursuse lõpetamist jagada ka kaasdoktorantide või kolleegidega, kellega õpetamiskohustusi jagati. Kursusel omandatud teoreetilisi teadmisi arutati teistega, et leida parimaid lahendusi õpetamispraktikas, mis arvestaks kaasdoktorantide ja kolleegide praktilisi kogemusi ning konkreetse õpetamiskonteksti reaalsel olukorda.

Samas kerkis esile ka puuduvate vestluste teema. Mõned doktorandid tõid välja, et ei räägi õpetamisest mitte kellegagi. Puuduvate vestluste alakategooria oli vestluste puudumine juhendajatega õpetamise teemal. Kui mõned osalejad märkisid, et on huvitatud õpetamisteemalistest vestlustest oma juhendajatega, siis enamik märkis, et erinevatel põhjustel nad õpetamisest juhendajaga siiski ei rääkinud. Uuringus osalenud doktorandid selgitasid, et nad ei võtnud juhendajatega ette vestlusi õpetamisest, sest nende arvates olid juhendajal kas puudulikud õpetamisoskused, negatiivne suhtumine õpetamisse, ajapuudus või muud prioriteetidid arutletavate teemade asjus. Siiski märkisid mõned uuringus osalejad, et mõnikord küsisid juhendajad neilt õpetamise kohta nõu, ning kirjeldasid pedagoogilisel kursusel omandatud teadmiste jagamist, mida nende juhendajad hästi vastu võtsid.

Uuringus osalenud doktorantide väitel oli mitteametlikest vestlustest õpetamise õppimine seotud refleksiooniga. Kuna pedagoogiline kursus hõlmas ka lühikeste, 15-minutiliste õppetundide andmist, said kursusel osalejad osa oma kaaslaste õpetamise üle reflekteerimisest nende tundide järel.

Vastusena teisele uurimisküsimusele „**Kuidas kujundab ülikooli kogukonnas aktsepteerimise kogemus doktorantide arvates õpetamise õppimist?**“ selgus uuringu tulemustest, et akadeemilises kogukonnas aktsepteerimist kogeti kolmel moel: võrdse partnerina (1. kategooria), piiride vastu pörkumisena (2. kategooria) ja tõrjutuna (3. kategooria). Esimesse kategooriasse (võrdse partnerina) kuuluvate kogemuste kirjeldused hõlmasid kogukonna kultuurinormide aktsepteerimist osalejate poolt, osalejate tunnetatud täielikku aktsepteerimist kogukonnas ja täielikku vabadust ülikoolis õpetamisel, sh täielikku toimevõimet (agentsust). Osalejaid ümbritsevat õpetamiskultuuri kirjeldati enamasti kui õppimiskeskset, samuti kirjeldati ülikooli kogukonnas tajutud ühist muret õpetamise ja õppimise kvaliteedi pärast. Teises ja kolmandas kategoorias vähenesid kogukonna kultuurinormide aktsepteerimise määr, tunnetatud aktsepteeritus kogukonnas ning toimevõime rakendamise võimalused. Lisaks selgus, et uuringus osalenud doktorandid ei kirjeldanud, et juhendajad oleksid neil aidanud mõista ülikooli õpetamiskultuuri norme ega saada ülikooli õpetamiskogukonna osaks.

Analüüsides kategooriatevahelisi seoseid ehk *outcome space*'i, võib leida seose ülikooli kultuurinormide aktsepteerimise ja kogukonnas aktsepteerituse vahel. Esimeses kategoorias kirjeldati kõige mitmekesisemat viisi aktsepteerimise kogemiseks, sealhulgas ülikooli õpetamiskogukonna poolt aktsepteerimist, kõige positiivsemat sotsiaalset suhtlust kogukonna liikmetega, suurimat autonoomiat õpetamisel ja täielikku toimevõimet. Autonoomia ja toimevõime vähenesid kogukonnas aktsepteerimise vähenemisega, mis tõi omakorda kaasa vähem suhtlemist üldiselt ja vähem positiivseid suhteid, sealhulgas ka teravamaid vastuolusid ülikooli õpetamiskogukonna liikmetega. Kuna õpetamise õppimine on sotsiaalne tegevus, mille keskmes on praktikakogukond, on ka varasemad uuringud toonud esile, et harvad või halvad suhted akadeemilise kogukonna liikmetega on doktorantide jaoks negatiivsete tagajärgedega (Gardner *et al.*, 2012). Seetõttu on vaja tõsta teadlikkust praktikakogukondade ja akadeemilise kogukonna liikmete rollist doktorantide õpetamise õppimisel ja täielikul lõimumisel ülikooli kogukonda.

Vastusena kolmandale uurimisküsimusele „**Kuidas kujundavad transformatiivse õppimise protsess ja selle kontekst doktorantide arvates õpetama õppimist ning õpetamisarusaamade ja -praktika muutumist õppimiskeskseks?**“ selgus, et transformatiivse õppimise protsessi ja liikumist õppimiskeskse suunas kirjeldasid osalejad seoses kogetud rahulolematusega oma õpetamises ning oma õpetamise kriitilise refleksiooniga, mis põhines teoreetilistele pedagoogikateadmistele. Lisaks mängisid transformatiivses õppimises rolli varasemad õpi- ja elukogemused, mis võimaldasid luua seoseid õppimiskeskse lähenemisega. Mil määral õppimiskeskne lähenemine omaks võeti ja seda oma õpetamises rakendati, oli erinev. Minimaalse transformatsiooni korral kirjeldati mõningast rahulolematust oma õpetamisega, mis võis olla tingitud vähesest õpetamis-

kogemusest. Tõsteti esile, et refleksioon oli transformatiivse õppimise oluline tunnusjoon.

Kolmel juhul toetas õpetamis-õppimiskeskond osalejate sõnul nende muutunud õpetamiskontseptsioone ja õppimiskeskset lähenemist, ühel juhul ei toetanud. Tajutud toetuse puudumisel õpetamis-õppimiskeskonnas jätkus transformatiivse õppimise protsess isegi juhul, kui see tähendas töökohast lahkumist ja mujal uuesti alustamist. Erinevus toetava ja vähem toetava keskkonna vahel oli osalejate tajutud kindlustunne ja julgustus nende muutunud õppimist ja õpetamist puudutavate arusaamade ja õpetamispraktika kohta.

Selle töö tulemused näitavad formaalse ja informaalset õppimise koosmõju olulisust, rõhutades samal ajal formaalse õppimise rolli transformatiivses õppimises. Need tulemused on kooskõlas Kyndti jt (2016) uuringu tulemusega, kus näidati, et formaalset ja informaalset õppimist ei tohiks vaadelda vastanditena, vaid üksteist täiendavatena, ning Ellströmi (2001) seisukohaga, et sügava mõistmise saavutamiseks ei piisa ühest ilma teiseta.

Lisaks aitab see uurimus mõista reflekteerimise tähtsust doktorantide õpetama õppimisel. Kriitiline refleksioon on vajalik kogemusest õppimiseks; üksinda reflekteerimine võib aga olla keeruline. Kuna enda õpetamispraktika ja õpetamiskontseptsioonide üle reflekteerimine on varasemates uuringutes õpetamise õppimise jaoks kasulikuks osutunud (Nevgi & Löfström, 2015), soovitatakse professionaalse kogukonnas õppimise ühe osana kasutada kaaslaste vaatlusi autentsetes õpetamiskontekstides, et õpetamise õppimist toetada ja hõlbustada (Noben *et al.*, 2021).

Selle uuringu tulemused andsid teadmisi doktorantide kogemustest seoses õpetama õppimisega ülikooli kogukonnas ja seoses doktoritööde juhendajatega. Uuringu tulemustest selgus, et doktorantide kogemused nende endi aktsepteerimisest ülikooli kogukonnas ja kogukonna kultuurinormide aktsepteerimisest on mitmekesised. Kui mõned doktorandid avaldasid, et nad kogesid täiel määral aktsepteerimist, siis olid teised keerulises olukorras enda eelistatud õpetamisviisi ja prevaleeriva õpetamiskultuuri vahelise erinevuse tõttu või seisis silmitsi väljakutsetega suhete loomisel õpetamiskogukonnas.

On oluline juhtida tähelepanu doktorantide poolt tunnetatud isolatsioonile, mida kirjeldasid need osalejad, kellel on ülikooliga minimaalne kokkupuude (näiteks töötamine käsunduslepingu alusel). See tulemus on kooskõlas Austini (2010) uuringu tulemustega. Kuigi doktorantidel on soovitatud isoleerituse probleemiga tegeleda, olles teadlik oma toimevõimest, ja otsida ise aktiivselt sidemeid ülikooli kogukonna liikmetega (McAlpine & Åkerlind, 2010), võib see olla märkimisväärselt raskem reaalses elus. Doktorantide puhul, kellel on piiratud kontaktid ülikooli õpetamiskogukonna liikmetega, ei mõjuta aeg nende täielikku integreerumist, kuna neil puuduvad võimalused oma võrgustike loomiseks, nagu soovitavad Lave ja Wenger (1998). Gardner jt (2012) on esile toonud, et akadeemilise kogukonna liikmed on jõupositsioonil ja suhted nendega on doktorantide jaoks olulised. Seetõttu peab doktorantidel õpetamise õppimiseks olema juurdepääs kogukonnale ja nad peavad saama luua suhteid kogukonna liikmetega. Viimased omakorda peavad olema teadlikud, et nad mängivad rolli doktorantide

sotsialiseerumisel ja aktsepteerimisel kogukonnas, mis omakorda aitab kaasa doktorantide õpetama õppimisele ülikoolis.

Juhendajad ei olnud selle uuringu tulemuste kohaselt enamasti need, kes räägiksid doktorantidega õpetamisest, aitaksid kaasa doktorantide täieõiguslikuks liikmeks saamisele õpetamiskogukonnas või aitaksid orienteeruda õpetamiskogukonna kultuurinormides. Uuringus osalenud doktorantide intervjuudest järelduvalt keskendusid juhendajad peamiselt teadustööle. See tulemus on kooskõlas Jepseni jt (2012) uuringu tulemusega, mis näitas samuti, et enamik doktorantide juhendajaid eelistasid, et nende juhendatavad keskendusid teadustööle, mitte ei arendaks õpetamisoskusi. Kuna juhendajad identifitseerivad end tõenäoliselt eeskätt teadlastena ja doktoriõppes keskendutakse teadustööle, on loomulik, et juhendajate ja juhendatavate vestlused puudutavad peamiselt teadustööd. Samas võib taoline keskendumine ainult teadustööle kahjustada doktorantide karjääriväljavaateid. On oluline rõhutada, et ülikooli karjäärimudel peaks näitama õpetamise ja selle arendamise väärtust ning selle samaväärsust teadustööga, kui soovitakse, et juhendajad doktorante õpetamisoskuste arendamisel toetaksid.

Tulemuste põhjal esitatakse selles töös mitmeid soovitusi, mis vajaksid laiemat arutelu erinevate osapoolte vahel. Näiteks on doktorantidel õppekava vaatest oluline omandada teoreetilised pedagoogilised teadmised koos võimalusega kogeda ise õppimiskeskset lähenemist selleks, et õppida õpetama. Lisaks peaksid doktoritöö juhendajad olema teadlikumad sellest, mis kasu on doktorantidele õpetamisoskuste omandamisest ja arendamisest. Uuringu tulemused viitavad ka sellele, et kuigi on mõistetav, et doktorantide juhendajate põhiline ülesanne on toetada uurimistööd, on ühtlasi nende vastutus toetada ülikooli õppejõudude järelkasvu. Kui ülikoolis ei väärtustata õpetamist, ei ole see paraku mitte ühe juhendaja, vaid kogu süsteemi küsimus. Nagu näitavad kõrgharidusreformid Eestis ja mujal maailmas, on kõrghariduses tekkimas senisest suurem tähelepanu õpetamisele. Kaas-aegseks teadlaseks ja õppejõuks olemine tähendab aga enamat teaduspublikatsioonide avaldamisest ja on rohkem kui kunagi varem seotud teadusliku käsitlusega õpetamisest.

ACKNOWLEDGEMENTS

In the following section, I would like to thank the people who have supported me on my doctoral journey.

First and foremost, I would like to express my gratitude to my supervisors Mari Karm and Torgny Roxå. It has been an honour and privilege to have such amazing supervisors. I am sure there have been moments when you have wondered and been frustrated with what on earth I was doing. However, I have never felt unwelcome with my questions, never discouraged or small after our discussions. I have learned from your example how to supervise, how to approach teaching and how to write about teaching. Mari, I am especially thankful for your support and chats during my first presentation in Aachen at an EARLI conference. I am truly grateful for the way you introduced Torgny as a supervisor to me and I will never forget the trip we took to Lund to discuss my thesis. You have been an inspiration to me as a university teacher, academic developer and a human being. Your kindness, patience, resilience and sense of humour are inspiring. Torgny, you have a miraculous way of providing feedback by asking considerate questions and guiding the thought process.

I would also like to thank Liina Lepp for her guidance with my first article, for thoughtful and constructive feedback. I appreciate all the corrections and suggestions in the final drafts of the dissertation as well. I do not know how I have deserved all the time and effort you have invested in me, but I cannot thank you enough for all the help and advice you have provided to me.

I would like to express my deepest gratitude to all the exceptional researchers who have been part of doctoral progress committees at the University of Tartu during my studies and have offered valuable feedback. Special thanks to Prof. Äli Leijen, Prof. Margus Pedaste, Prof. Miiia Rannikmäe, Prof. Krista Uibu, Assoc Prof. Merle Taimalu and Assoc Prof. Rain Mikser. Your questions, remarks, and suggestions have given me invaluable insights that have significantly enhanced my research and the doctoral thesis. I would specifically like to thank Assoc Prof. Rain Mikser for thought-provoking comments, a collegial discussion and additional materials provided to me before the thesis submission.

I am deeply appreciative of all the doctoral students who contributed their time to the interviews that form the basis for this dissertation. Without your candid accounts of the experiences of learning about teaching, this dissertation would have never existed. I personally felt I had so much to learn about your experiences and, through this dissertation, so can many others.

I would like to thank my fellow doctoral students with whom we could discuss my articles and the dissertation during doctoral seminars. Your comments were spot on and helped me see the work with fresh eyes. I would especially like to express my gratitude to Moonika Teppo for her support and examples that helped me in the final stages of preparing the work to be submitted, Maarja Sõrmus for her positive attitude during doctoral seminars and Helin Semilariski for her

guidance and suggestions preparing for the defence. It has been a joy to know all of you! I know you all will do great things in the future.

My deepest gratitude to Suzanne Christina Cheetham for language advice and editing. With your keen eye for details, you have infinitely enhanced the quality of my writing. Thank you for all your hard work!

I would like to express my gratitude to those institutions where I worked during the six years of my doctoral studies that understood the value of doctoral education and encouraged me to pursue it. Thank you for asking me how my studies were going, Col (ret) Dr (hab) Zdzisław Śliwa, Dean of the Baltic Defence College. This always gave me a boost to continue. Thank you, Marko Piirsoo, head of the Department of Strategic Analysis at the Estonian Research Council for the support needed to complete my studies.

I would like to dedicate this dissertation to my family. My husband Risto, without whose support, encouragement, and sense of humour I could not have done it. Thank you for believing in me! Thank you for rejoicing with me every time I hit an important milestone and letting me know how proud you are of me. My darling Kreetta, the eternal pride of my heart, thank you for being my emotional support and being understanding when I needed time for writing and studying! I would also like to thank my mother-in-law Anne for her kindness and reassuring words.

PUBLICATIONS

CURRICULUM VITAE

Name: Triinu Soomere
Date of Birth: 8 October 1976
Nationality: Estonian
Telephone: (+372) 56 697 997
E-mail: triinu.soomere@hotmail.com

Education

2018–2024 University of Tartu, doctoral student, educational science
2014–2016 University of Tartu, MA, Educational Leadership, *cum laude*
200–2002 University of Tartu, Applied Master’s degree (Mag), conference interpreting
2000–2001 University of Tartu, Department of Pedagogy, teacher training
1996–2001 University of Tartu, *baccalaureus artium*, English Language and Literature

Professional experience

Feb 2023– ... Estonian Research Council, Senior Coordinator of R&D evaluations
April 2020–Jan 2023 Estonian Aviation Academy, Vice Rector for Education
Aug 2019–April 2020 Baltic Defence College, Manager of academic development and outreach, lecturer in critical thinking and communication
Aug 2016–July 2019 Baltic Defence College, lecturer in critical thinking and communication
2016 Jan–2016 Aug Foundation Innove, Chief specialist in the English language, Division of testing (maternity leave replacement)
2015–2016 Estonian National Defence College, Head of the Language Centre of the Estonian Defence Forces, Lecturer in English
2008–2015 Estonian National Defence College, Head of the Foreign Language Teachers’ Section, Lecturer in English
2003–2008 Estonian National Defence College, Head of the Language Training Section, Teacher of English
2002–2003 Estonian National Defence College, Teacher of English
2000–2002 Language School Dialogo, Teacher of English

Publications

- Soomere, T., Karm, M., & Roxå, T. (under submission). PhD Students' Acceptance of the University Teaching Community's Cultural Norms and by the Teaching Community: a Phenomenographic Study. *Journal of Further and Higher Education*.
- Soomere, T., & Karm, M. Roxå, T. (2024). PhD students' transformative change in teaching: a comparative case study. *Journal of Transformative Education*.
- Soomere, T., Karm, M. (2021). PhD students' conversations that lead to learning about teaching: the interplay of formal and informal learning. *International Journal for Academic Development*, 26(3), 252–265.
- Värno, P., Soomere, T., Lepp, L. (2019). Kaitseväe Ühendatud Õppeasutuste taktikaõppejõudude arusaamad nüüdisaegse õpikäsituse olemusest ja rakendamisest taktikaõppes. *Sõjateadlane 10. Õppija arengu toetamine*.
- Soomere, T., Lepp, L., Groccia, J., Mansour, E.A.I. (2018). Characteristics and behaviours of excellent teaching: perceptions of military educators. *IATED Publications*.
- Soomere, T., Lepp, L. Remmik, M., Leijen, Ä. (2017). Kaitseväe Ühendatud Õppeasutuste põhikursuse kadettide kogemused, uskumused ja ettepanekud seoses nutivahendite kasutamisega õppetegevuses. *Sõjateadlane 4*, 145–169.
- Ganina, S., Otsus, T., Parv, A., Rand, N., Soomere, T. (2013). Mentorlus KVÜÕAs kui kooli arengu toetamise võimalus. *KVÜÕA Toimetised 17*.

ELULOOKIRJELDUS

Nimi: Triinu Soomere
Sünniaeg: 08.10.1976
Kodakondsus: Eesti
Telefoninumber (+372) 56 697 997
E-mail: triinusoomere@hotmail.com

Haridustee

2018–2024 Tartu Ülikool, doktoriõpe, haridusteaduse eriala
2014–2016 Tartu Ülikool, magister, *cum laude*, hariduskorralduse eriala, koolijuhtimine
2001–2002 Tartu Ülikool, magister, konverentsitõlke eriala
2000–2001 Tartu Ülikool, õpetajakoolitus, põhikooli ja gümnaasiumi inglise keele õpetaja
1996–2001 Tartu Ülikool, *baccalaureus artium*, põhieriala inglise keel ja kirjandus (kõrvalerialad saksa keel ja suuline tõlge)

Teenistuskäik

veebr 2023–... Eesti Teadusagentuur, teadus- ja arendustegevuse välis- hindamise vanemkoordinaator
aprill 2020–jaan 2023 Eesti Lennuakadeemia, õppeprorektor
aug 2019–aprill 2020 Balti Kaitsekolledž, arendus- ja väliskoostöö juht, kriitilise mõtlemise ja akadeemilise kirjutamise lektor
aug 2016–juuli 2019 Balti Kaitsekolledž, kriitilise mõtlemise ja akadeemilise kirjutamise lektor
2016 jaan–aug SA Innove, inglise keele peaspetsialist (lapsehooldus- puhkusel oleva töötaja asendaja)
2015–2016 Kaitseväe Ühendatud Õppeasutused, Kaitseväe keele- keskuse juhataja, inglise keele lektor
2008–2015 Kaitseväe Ühendatud Õppeasutused, Kaitseväe keele- keskuse võõrkeeleõpetajate grupi juhataja, inglise keele lektor
2003–2008 Kaitseväe Ühendatud Õppeasutused, Kaitseväe keele- keskuse keeleõppe sektsiooni juhataja, inglise keele lektor
2002–2003 Kaitseväe Ühendatud Õppeasutused, inglise keele vanem- õpetaja
2000–2002 AS Dialoog, inglise keele õpetaja

Publikatsioonid

- Soomere, T., Karm, M., & Roxå, T. (avaldamisel). PhD Students' Acceptance of the University Teaching Community's Cultural Norms and by the Teaching Community: a Phenomenographic Study. *Journal of Further and Higher Education*.
- Soomere, T., & Karm, M. Roxå, T. (2024). PhD students' transformative change in teaching: a comparative case study. *Journal of Transformative Education*.
- Soomere, T., Karm, M. (2021). PhD students' conversations that lead to learning about teaching: the interplay of formal and informal learning. *International Journal for Academic Development*, 26(3), 252–265.
- Värno, P., Soomere, T., Lepp, L. (2019). Kaitsevæe Ühendatud Õppeasutuste taktikaõppejõudude arusaamad nüüdisaegse õpikäsituse olemusest ja rakendamisest taktikaõppes. *Sõjateadlane 10. Õppija arengu toetamine*.
- Soomere, T., Lepp, L., Groccia, J., Mansour, E.A.I. (2018). Characteristics and behaviours of excellent teaching: perceptions of military educators.[Head õpetamist iseloomustavad tegevused ja omadused: sõjaväelises õppeasutuses töötavate õpetajate arusaamad.] *IATED Publications*.
- Soomere, T., Lepp, L. Remmik, M., Leijen, Ä. (2017). Kaitsevæe Ühendatud Õppeasutuste põhikursuse kadettide kogemused, uskumused ja ettepanekud seoses nutivahendite kasutamisega õppetegevuses. *Sõjateadlane 4*, . 145–169.
- Ganina, S., Otsus, T., Parv, A., Rand, N., Soomere, T. (2013). Mentorlus KVÜÕAs kui kooli arengu toetamise võimalus. *KVÜÕA Toimetised 17*.

DISSERTATIONES PEDAGOGICAE UNIVERSITATIS TARTUENSIS

1. **Карлеп, Карл.** Обоснование содержания и методики обучения родному языку во вспомогательной школе. Tartu, 1993.
2. **Ots, Loone.** Mitmekultuurilise hariduse õppekomplekt eesti kirjanduse näitel. Tartu, 1999.
3. **Hiie Asser.** Varajane osaline ja täielik keeleimmersioon Eesti muukeelse hariduse mudelitena. Tartu, 2003.
4. **Piret Luik.** Õpitarkvara efektiivsed karakteristikud elektrooniliste õpikute ja drillprogrammide korral. Tartu, 2004.
5. **Merike Kull.** Perceived general and mental health, their socio-economic correlates and relationships with physical activity in fertility-aged women in Estonia. Tartu, 2006.
6. **Merle Taimalu.** Children's fears and coping strategies: a comparative perspective. Tartu, 2007.
7. **Anita Kärner.** Supervision and research training within the professional research community: Seeking new challenges of doctoral education in Estonia. Tartu, 2009.
8. **Marika Padrik.** Word-formation skill in Estonian children with specific language impairment. Tartu, 2010.
9. **Krista Uibu.** Teachers' roles, instructional approaches and teaching practices in the social-cultural context. Tartu, 2010.
10. **Anu Palu.** Algklassiõpilaste matemaatikaalased teadmised, nende areng ja sellega seonduvad tegurid. Tartu, 2010.
11. **Mairi Männamaa.** Word guessing test as a measure of verbal ability. Use of the test in different contexts and groups. Tartu, 2010.
12. **Piret Soodla.** Picture-Elicited Narratives of Estonian Children at the Kindergarten-School Transition as a Measure of Language Competence. Tartu, 2011.
13. **Heiki Krips.** Õpetajate suhtlemiskompetentsus ja suhtlemisoskused. Tartu, 2011.
14. **Pille Häidkind.** Tests for assessing the child's school readiness and general development. Trial of the tests on the samples of pre-school children and first-grade students in Estonia. Tartu, 2011.
15. **Karmen Trasberg.** Keskkooli- ja gümnaasiumiõpetajate ettevalmistus Eesti Vabariigis (1918–1940) õpetajakoolituse ajaloolise kujunemise kontekstis. Tartu, 2011, 207 lk.
16. **Marvi Remmik.** Novice University Teachers' professional development and learning as a teacher: Opportunities and Conditions at Estonian Higher Education Institutions. Tartu, 2013, 129 p.
17. **Pilve Kängsepp.** Küsimuste kasutamine kui võimalus toetada õpilaste arusaamist loetust. Tartu, 2014, 125 p.

18. **Marge Täks.** Engineering students' experiences of entrepreneurship education. A qualitative approach. Tartu, 2015, 150 p.
19. **Reelika Suviste.** Students' mathematics knowledge and skills, and its relations with teachers' teaching and classroom management practices: Comparison between Estonian- and Russian-language schools. Tartu, 2015, 147 p.
20. **Liina Lepp.** The objectives of doctoral studies and factors influencing doctoral study process from the perspectives of different parties. Tartu, 2015, 271 p.
21. **Ülle Säälilik.** Reading literacy performance: Metacognitive learning strategies matter, schools have effect on student outcomes. Tartu, 2016, 119 p.
22. **Katrin Saks.** Supporting Students' Self-Regulation and Language Learning Strategies in the Blended Course of Professional English. Tartu, 2016, 216 p.
23. **Anne Okas.** Novice and experienced teachers' practical knowledge in planning, delivery and reflection phases of teaching. Tartu, 2016, 172 p.
24. **Küllli Kori.** The Role of Academic, Social and Professional Integration in Predicting Student Retention in Higher Education Information Technology Studies. Tartu, 2017, 168 p.
25. **Ingrid Koni.** The perception of issues related to instructional planning among novice and experienced teachers. Tartu, 2017, 142 p.
26. **Ivar Männamaa.** Development of an educational simulation game and evaluation of its impact on acculturation attitudes. Tartu, 2017, 154 p.
27. **Egle Säre.** Developing the reasoning skills of pre-schoolers through Philosophy for Children. Tartu, 2018, 131 p.
28. **Anu Sööt.** The procedure of guided core reflection for supporting the professional development of novice dance teachers. Tartu, 2018, 135 p.
29. **Tiina Anspal.** The development of teacher identity through role and self-conception in pre-service teacher education. Tartu, 2018, 157 p.
30. **Age Salo.** The dual role of teachers: school-based teacher educators' beliefs about teaching and understandings of supervising. Tartu, 2019, 156 p.
31. **Mirjam Burget.** Making sense of responsible research and innovation in science education. Tartu, 2019, 175p.
32. **Kaire Uiboleht.** The relationship between teaching-learning environments and undergraduate students' learning in higher education: A qualitative multi-case study. Tartu, 2019, 169 p.
33. **Karin Naruskov.** The Perception of Cyberbullying among Estonian Students According to Cyberbullying Types and Criteria. Tartu, 2020, 176 p.
34. **Raili Allas.** Supporting teachers' professional development through reflection procedure. Tartu, 2020, 182 p.
35. **Triinu Kärbla.** Assessment of text comprehension and teaching comprehension strategies in Estonian basic school. Tartu, 2020, 183 p.
36. **Kadi Luht-Kallas.** Risk-taking behaviour: Relationship with personality and markers of heritability, and an intervention to prevent unintentional injury. Tartu, 2020, 135 p.

37. **Tõnis Männiste.** Measuring military commanders' decision making skills in a simulated battle leading environment. Tartu, 2020, 256 p.
38. **Maile Käsper.** Supporting primary school students' text comprehension and reading interest through teaching strategies. Tartu, 2021, 158 p.
39. **Liina Malva.** Teachers' General Pedagogical Knowledge: Its Nature, Assessment and Representation in Practice. Tartu, 2021, 163 p.
40. **Liina Adov.** Predicting teachers' and students' reported mobile device use in stem education: The role of behavioural intention and attitudes. Tartu, 2022, 160 p.
41. **Wilson Ofotsu Otchie.** Social Media in Education: Contextualizing Teaching with Social Media in High School. Tartu, 2022, 205 p.
42. **Karmen Kalk.** Using blogs to promote and predict reflection during teaching practice and induction year. Tartu, 2022, 139 p.
43. **Gerli Silm.** Test-Taking Motivation in Low-Stakes and High-Stakes Testing Contexts. Tartu, 2022, 156 p.
44. **Innocent Kwame Bedi.** Determining school heads' practices aimed at ensuring school quality and the resulting job stress factors: a study of senior high school heads in Ghana. Tartu, 2022, 160 p.
45. **Tiina Kivirand.** The Meaning of Inclusive Education and Supporting the Implementation of Inclusive Education through In-service Training Course in the Estonian Context. Tartu, 2023, 173 p.