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A comparative study of three educational development courses for doctoral students and teaching and learning initiatives in higher education

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Executive Summary

Educational development initiatives in the form of short-lived, isolated pedagogical courses may at best change the thinking and practice of a few pioneers, and then perhaps only temporarily. It is only possible to successfully address the need that such initiatives are intended to meet if the impact is lasting and effects a cultural change locally at the university. In this study, we look beyond the immediate and detached impact of a single course, Learning-Centred and Reflective Teaching: From Theory to Good Practice, and suggest ways in which this course in particular and newly established development courses in general may endure and blossom into wider educational development activities. We believe our findings can be of benefit to institutional developers of new initiatives in teaching and learning in higher education, national policy-makers, and grant agencies supporting or planning to support similar initiatives.

First, we place the Erasmus+ grant-supported course at Masaryk University (MUNI) and the University of Economics in Bratislava (EUBA) in a comparative perspective at the individual level and compare it to long-standing and reputable educational development courses from the University of Tartu and Lund University, looking at their quality, viability, and impact. This horizontal comparison across courses establishes that the three courses (1) have been designed along the same principles, even though these principles were realized differently mostly because they had to be adapted to local needs and contexts; and (2) have performed equally well when looking at impact on the level of individuals.

Second, we focus our attention to the institutional level and compare additional educational development activities at these three universities. Here, as expected, we identify differences especially between the nascent MUNI/EUBA and the two more mature initiatives, including the nature and breadth of these activities and their impact on institutional culture. These differences are instrumental in understanding not only the progress at MUNI/EUBA since the beginning of

the grant project, but also in setting future directions for this and similar initiatives and informing the designers of any new educational development courses and initiatives. We find that increasing the local embeddedness and visibility of educational development courses and activities are beneficial for this end. We highlight four ways in which this could be achieved. We recommend that (1) the course is also made available in the local language to be able reach more of the university faculty including doctoral students, (2) local educational developers are trained to run the course and to provide educational development activities as needed, (3) that in the first years of the project more frequent local events—for example, small conferences or workshops—are held in order to raise awareness in educational development, and (4) an educational development unit is established at the university, a place where faculty interested in issues of teaching and learning could turn for advice and go meet one another.

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Introduction

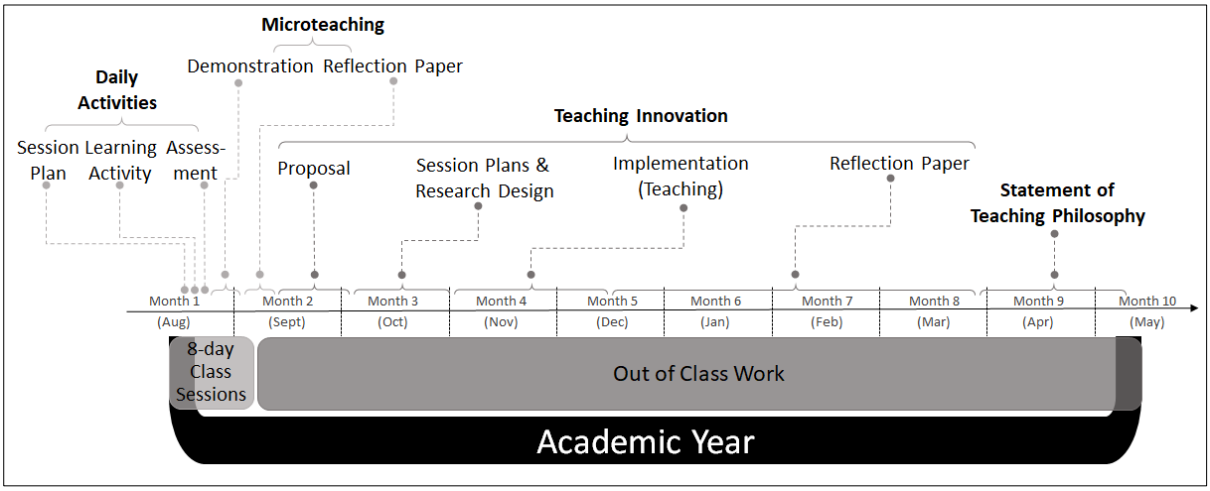
The one-year course Learning-Centred and Reflective Teaching: From Theory to Good Practice was designed to bring a new perspective, student-centered teaching and learning, to the teaching practice of doctoral students. Two Central European universities, the University of Economics in Bratislava (EUBA) and Masaryk University (MUNI, were selected for two consecutive pilot runs of the course. In the long term, this course is intended to serve as a model and be available for other institutions of higher education in Central Europe. Participants in the course were awarded 10 ECTS credits and given a certificate by the renowned Staff and Educational Development Association (SEDA) to each graduate, but participation was voluntary and the course was not included in the compulsory or elective courses of the participants' doctoral programs. The course targets doctoral students of primarily social science disciplines and its language of instruction is English.

The course has a two-phase structure (figure 1 on next page). During the first phase, course participants take part in an 8-day summer school, which gives them theoretical and methodological foundations focusing on issues like student-centeredness, designing courses and class sessions, teaching small and large groups, assessment, technology-enhanced learning, and reflection on practice. The summer school uses and models student-centered methods. A microteaching demonstration component ensures the link between theory and practice in the in-class segment of the course. In microteaching, participants teach a topic in their discipline in a small-group (6-7 participants) setting for 15 minutes, and receive feedback from their peers and session leader, which then they use for writing a reflection paper on their experience of microteaching.

The second phase of the course is designed to allow participants to deepen and apply the knowledge they gained in the summer school through a series of exercises that they complete

with the help of a coach. This phase focuses on the design, implementation, and evaluation of a teaching innovation that requires participants to bring something new to their—and often their departments'—teaching practice, and culminates in a paper that reflects on the effectiveness of the newly introduced technique(s) or activity(ies). The teaching innovation is completed in four steps: (1) proposal, (2) session plan and research design, (3) teaching (i.e. implementation), and (4) impact evaluation in form of a reflection paper. In the last part of this phase, at the end of the course, participants prepare a statement of their teaching philosophy in which they describe their attitude toward and practice of teaching at the university level. Participants receive formative feedback from their coach on each assignment in this phase of the course (for simplicity, figure 1 does not depict the redrafting process that participants go through to address key feedback from their coach).

Figure 1. Course structure and compulsory assignments of the year-long educational development course, Learning-Centered and Reflective Teaching: From Theory to Good Practice at MUNI and EUBA.



The first measure of success of any course in teaching and learning lies with the participating individuals. Learning-Centered and Reflective Teaching: From Theory to Good Practice proved successful in this regard. Analysis show that participants not only found the course useful for

developing and honing their teaching skills, but also progressed toward the learning objectives of the program: they changed their conception of teaching, moving from a teacher-centered view dominated by frontal lectures common at their universities to a student-centered perspective where the learning needs of the students were prioritized to the needs of the teacher. They showed significant progress in knowing and using theories and methods of the scholarship of teaching and learning (SoTL). The coaches in the course also noted that participants showed improvement, albeit minor. Participants also showed progress beyond the learning outcomes of the course: they developed their skills in writing an academic research paper according to the expectations of the English-dominated international academic community, and built their confidence as teachers. Confidence is important for becoming a successful teacher in general, and is essential for student-centered teaching in particular because focusing on the student requires teachers to take higher risks during the teaching and learning process. Most participants also gained a reputation for their interest in teaching and in a few cases their colleagues and superiors have already involved them in the teaching-related work of their department through curriculum design or greater responsibilities in teaching, for example, as course guarantors.

Similarly to recent teaching courses in higher education in other contexts (e.g. Simon and Pleschová 2013; Meizlish et al. 2018; Lamers and Admiraal 2018; Reimann 2018; Moya et al. 2019), the course had a positive impact at the individual level, i.e. on course participants. We identified some areas where improvement could be made, such as trying to increase the completion rate above 67% and building a formal community of practice among course graduates, but these opportunities for improvement do not call into question the effectiveness of the course.[1] However, the clear impact we observed at the individual level does not guarantee the

[1] Voluntary teaching and learning courses with a similar lifespan in the region have similar completion rates (Vanderziel et. al 2019; Duschinská and High 2018). Regarding communities of practice, some, if not all graduates continue to discuss teaching-related issues informally.

long-term survival of the pedagogical course and its impact on participating individuals, nor does it guarantee its evolution into larger educational development programs or a university-wide change in how teaching is perceived and practiced within the institution, which would be considered the most evident indicators of success. The factors that facilitate these more desirable outcomes have not yet been studied systematically. This study fills this gap.

Understanding these factors can potentially help educational developers and decision makers to anticipate the future of pedagogical courses. In the case of this project, once the grant period ends, the current host universities will either take over responsibility for the course itself—the Department of Pedagogy at EUBA—or inherit the knowledge and expertise knowhow take over responsibility for educational development for doctoral students—the Pedagogical Competence Development Centre (CERPEK) at MUNI. The conclusions reached in this study could potentially help them manage, redesign, and expand the current course to achieve better results. More generally, higher education institutions that are planning to modernize their teaching will have a better chance for success if they plan for both the short term and the long term and for individual and institutional levels alike. Finally, both external (i.e. grant agencies) and internal (i.e. university departments, faculties, and administration) funding units can use on the conclusions of this study to make decisions about distributing their resources, designing calls for funding applications, and selecting among candidate projects.

We have conducted a quasi-longitudinal study that compares the nascent EUBA/MUNI course with two other initiatives, one at the University of Tartu, Estonia, and another at Lund University, Sweden. In both of these initiatives are similar research-focused institutional environments where teaching-centered education was originally prevalent, but where educational development work has succeeded in effecting a lasting change in not just the thinking of a few individuals, but rather in the institution's teaching culture as a whole. We discuss the rationale for a quasi-

longitudinal study in the methodological section. Next, in order to show the comparability of our cases, we describe the educational development courses for doctoral students and their evolution in Tartu and Lund and then compare the three courses and their impact at the individual level. This is followed by a description of additional educational development activities with some attention to historical developments in all three institutions as well as a comparison of their most notable features and their institutional level impact. We conclude with a number of recommendations for nascent teaching and learning initiatives in higher education with regards to increasing their local institutional embeddedness and visibility.

Methodology

In conducting our analysis, we have used a quasi-longitudinal analysis of three courses/programs of differing levels of maturity: the nascent MUNI/EUBA course (2 years), the maturing course at the University of Tartu (12 years) and Lund University's mature course (27 years). This approach is novel as existing studies tend to focus on a single course or several courses within the same institution at one point in time, often when the courses/programs are still in their infancy. Long-term educational development courses/programs lack comparable data at different points of their existence, especially the early stages, and thus struggle to perform any sort of longitudinal analysis of the decades-long lifespan of their course.[2] The different lifespans of the three educational development initiatives studied herein make it possible to describe not only how educational development programs can succeed and evolve, but also what kind of impact to expect from programs at different levels of maturity.

[2] Data from the early days of mature courses are scant due to progress within SoTL: data collection has vastly improved over the past couple of decades.

The overall purpose is abductive. We confront existing knowledge in the field with a new question and seek a new understanding, a new aspect of theory (Alvesson and Kärreman 2007): considering what we know about impact from pedagogical courses, how can we anticipate impact from educational development programs where courses are but one intervention among many? Our study is exploratory in nature, and is focused on parsing out similarities and differences in program elements and impact rather than testing theoretical expectations about the cases.

We utilize a comparative case study approach (Bartlett and Vavrus 2017a; 2017b), where the phenomena of interest, namely the three educational development programs, form the starting point for an iterative reflection pursuing a case that 'trace[s] across sites and scales to understand how the phenomenon came into being' (Bartlett and Vavrus 2017a: 10). During the analysis we focus on three axes of comparison: 'a horizontal look that not only contrasts one case with another, but also traces social actors, documents, or other influences across these cases; a vertical comparison of influences at different levels […]; and a transversal comparison over time' (Bartlett and Vavrus 2017a: 14).

To explore the three axes, we have used a series of narratives for each of the three contexts, which we included as supplements to this study.[3] For the horizontal axis, we chose to focus on pedagogical courses for doctoral students, which currently take place in all three contexts and can serve to illustrate how educational developers in each context work with academic teachers. The narratives for this axis describe the courses and the way they are conducted in each context. For the vertical axis, we looked for evidence of impact by educational development initiatives using Kreber and Brook's (2001) six-level model impact as a framework for analysis. Using this framework, we studied (1) participants' perceptions/satisfaction; (2) participants' beliefs about teaching and learning; (3) participants' teaching performance; (4) students' perceptions of staff's

[3] The narratives contain the detailed course descriptions, course and program history (only for Lund and Tartu) and impact analyses based on qualitative and quantitative data.

teaching performance; (5) students' learning; and (6) effects on the culture of the institution. In this model a cultural shift within an institution is the most advanced and also the most complex impact an educational development initiative/program can have. The narratives for the vertical axis present various types of evidence of impact for each level, discuss how this evidence shows impact, and note where evidence (direct or indirect) might not yet exist. For the transverse axis, we looked at how each program has developed over time; the narratives for this axis recount how each program began, identify critical points of success and failure along the way, and trace ways that initial initiatives have spread over time.

The narratives for each context were prepared by the respective educational developers in each context, and contain evidence gathered from existing studies, documents, and various sources of data (e.g. surveys, interviews, participant assignments). In this study, we summarize and discuss our findings from comparing these narratives.

The doctoral courses: a comparative view at the individual level

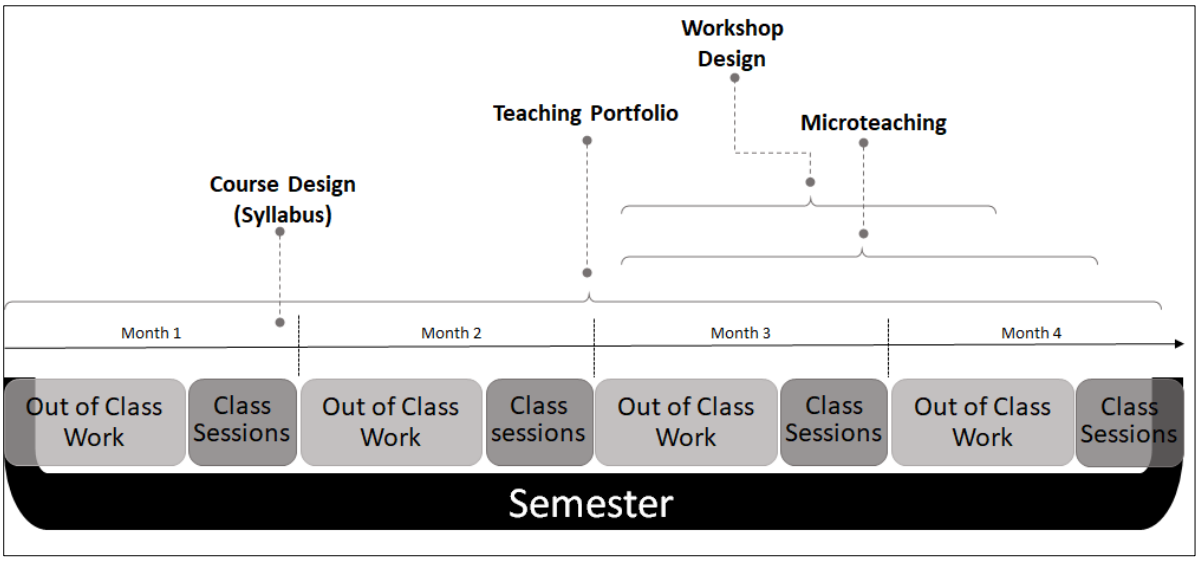
The University of Tartu

At the University of Tartu, the pedagogical course for doctoral students was designed in the context of a curriculum change of doctoral studies, which aimed to enhance the development of transferable skills of doctoral students. This reform introduced a number of elective courses, including the pedagogical course, Learning, Teaching and Supervision (originally called Learning and Teaching in Higher Education). This one-semester-long course has been taught regularly at the University of Tartu since 2005 and is worth 6 ECTS credits. The course is offered twice a year—in the autumn semester in Estonian and in the spring semester in English—and is attended each time by approximately 20 to 25 participants, who, with very rare exceptions, all tend to complete the course. As this is an elective, university-wide course, students come from all

disciplines of the social sciences, humanities, natural sciences, mathematics, information technology, and medicine. Teaching experience is not required to attend the course as doctoral students at the University of Tartu are not obliged to teach.

The general objective of the course is for the participants to adopt the student-centered approach to teaching. The course follows the principle of experiential learning and is taught using teaching methods that support active learning. Reflection tasks are used to consider previous experiences as students as well as experiences gained during the course. The course has a total of 8 days of face-to-face meetings, two days each month for four months (see figure 2). Between these in-class meetings, out-of-class learning activities are planned, during which participants do independent work online via Moodle.

Figure 2. Structure and major assignments of the semester-long educational development course, Learning, Teaching and Supervision at the University of Tartu.



There are four assessment tasks in the course, each of which extends over several weeks and combines the in-class and e-learning dimensions. First, to demonstrate their understanding of the concepts of constructive alignment and the principles of assessment and student engagement,

participants create a new course plan or revise an existing course plan (syllabus) that demonstrates a student-centered approach. Second, participants deliver a 15-minute microteaching presentation called a mini-lesson, which is followed by a 15-minute feedback session. The mini-lessons are organized in smaller groups (7-8 participants) and each group has a mentor that helps to facilitate the feedback process. Third, participants work in groups to create a plan for a workshop for adult learners. Fourth, each participant assembles a learning portfolio, which contains various smaller tasks that are written during the course: an essay on learning and teaching, comments on articles read during the course, first meeting plan for the supervisory process, and various reflective text on their experience as students, group work, and microteaching, etc.

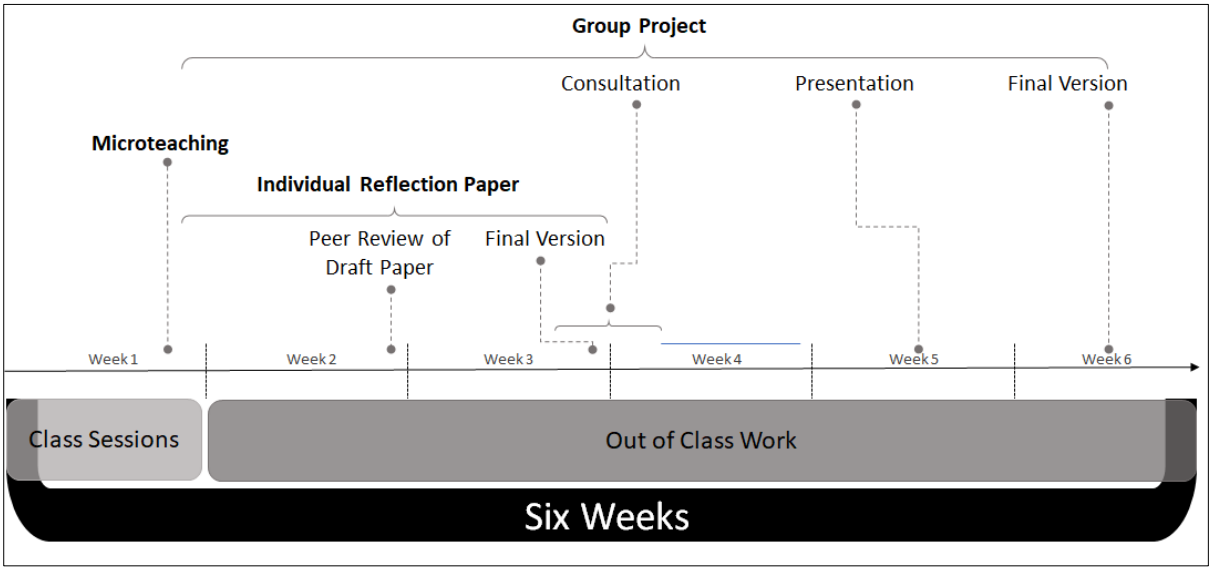
Lund University

Although the pedagogical course for doctoral students has been offered since 1992 at the Faculty of Engineering (LTH) of Lund University, it has been revised several times. The current iteration of the course, Introduction to Teaching and Learning in Higher Education, has been offered since 2004 and is run four times a year—twice in English and twice in Swedish. The course is spread over six weeks and requires 120 hours of work from the participants, who receive 5 ECTS credits upon graduation. The aim of the course is to introduce participants to issues and ideas about teaching and learning in higher education, to prepare them to make decisions in teaching that benefit students' learning. An additional aim of the course is to provide the participants with a foundation for further professional development as a teacher in higher education. The course is attended by about twenty-five participants each time. Doctoral students at LTH who normally have teaching responsibilities are required to take this course as part of their doctoral course

work. However, all participants need to get their supervisor's approval in order to apply for the course.

The course consists of a full week of class time followed by various feedback sessions and a final day of presentations (figure 3). The course begins with 40 hours of classroom sessions where the participants are organized into groups by discipline, so that they can more easily negotiate and understand concepts of teaching and learning based on a (mostly) common pedagogical reality. During this first week, participants learn about such foundational pedagogical concepts as deep and surface approaches to learning (Marton and Booth 1997), constructive alignment and the SOLO taxonomy (Biggs and Tang 2007), communication in and outside the classroom, assessment and examination, evaluating teaching (Ramsden 2005) and teaching careers, including the effective use of teaching portfolios (Olsson and Roxå 2013). The rest of the course is conducted via individual and groupwork outside of the regular classroom.

Figure 3. Structure and major assignments of the educational development course, Introduction to Teaching and Learning in Higher Education at Lund University.



The course is built around three assignments requiring advance preparations starting during the last days of the introductory week. First, during the course week, participants take part in a microteaching exercise. In this peer teaching session, each participant teaches their fellow participants about a teaching method. This lesson builds on relevant literature and is prepared in groups, but delivered individually. The second assignment is a group project where participants pursue a pedagogical issue of their own choosing. Each group meets with one of the course leaders to discuss their project and its progress and although groups are encouraged to communicate with the course leaders as needed in their project work, this meeting is the only a compulsory checkpoint. Each group produces a final report and presents it at a course finale. The report is a piece of scholarship of teaching and learning and as such the report is peer-reviewed within the course and made public to all other teachers in the faculty. The third assignment is an individual reflection paper, where participants describe a pedagogical situation they have experienced and use relevant concepts and perspectives from educational research to analyze the experience. Each participant discusses their draft with a critical friend of their choosing, normally a more experienced teacher from their home teaching context, as a way of talking about what they are learning and in order to receive more discipline-specific feedback on their analysis. Each participant is also required to attend a peer feedback session where they exchange oral feedback about their individual paper with two other course participants. Between the weeks five and six, both the group and individual papers are redrafted before final submission.

Comparative analysis of three doctoral courses

Based on the description of the three courses in the introduction (MUNI/EUBA) and the preceding section (Lund University, University of Tartu), we have identified a series of similarities and differences.

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Table 1. Meeting the principles of good design for doctoral courses at MUNI/EUBA, the University of Tartu, and Lund University.

Criteria	MUNI/EUBA (nascent)	University of Tartu (maturing)	Lund University (mature)
Respond to local needs	Needs assessed based on survey among doctoral students at MUNI and EUBA; Developed specifically for Czech/Slovak setting with local and international experts	Course takes into account actual participant's needs; Developed specifically for the Estonian setting with local experts	Course is revised as faculty's needs change; Developed specifically for the needs of LTH faculty based on local expertise
Length	1 academic year	1 semester	6 weeks
Embedded in practice	Microteaching of disciplinary topics; Teach and analyze impact of a minimum of three sessions during the online course segment	Participants' practice-based needs are built into course each semester; Microteaching of disciplinary topics	Individual project about personal teaching/learning experience
Spaced out	Assignments require advance preparations and are spread out over the course	Assignments require advance preparations and are spread out over the course	Assignments require advance preparations and are spread out over the course
Interleaved	Working on teaching plans and related research simultaneously	Working on microteaching, groupwork, portfolio simultaneously; Alternates between face-to-face and online assignments	Working on individual and group projects simultaneously
Peer review critical dialogue	Peer feedback on summer school daily activities; Microteaching demonstration; Peer classroom observation (optional)	Peer feedback on course design (syllabus); Peer-feedback on microteaching; Peer discussion on presentation about group project on adult learning workshop	Peer feedback session about individual paper; Presentation and discussion of group project with peers

The similarities are particularly useful because they demonstrate not only that comparing the impact of these courses is worthwhile but that Lund and Tartu can provide valid lessons for the course at MUNI/EUBA and other educational development courses that follow similar principles of course design. All three courses embody the criteria identified for successful educational development courses: they all conform to local needs and teachers' practices (Saroyan and Trigwell 2015; Lamers and Admiraal 2018; Reimann 2018; Trowler 2008; Chalmers et al. 2011), and they all acknowledge that it takes time to have an impact on pedagogical practices, and are therefore designed as longer—i.e. longer than a few days of workshops—interventions with their content being spaced out and an interleaved (Bickerstaff and Cormier 2015; Chalmers and Gardiner 2015; Hanbury et al. 2008; Stes et al. 2007; Stewart 2014; Postareff et al. 2007). Each course scaffold peer review and critical dialogue among participants (Roxå and Mårtensson 2009; Roxå et al. 2011; Van Waes et al. 2015; Saroyan and Trigwell 2015; Centola 2018). The details of how these appear in the three courses are displayed in table 1.

Similarities also appear in more specific aspects of the courses (table 2). All three courses share the learning objectives of (1) shifting participants' thinking and practice toward student-centered education; (2) aiming at participants basing their practice in theories of teaching and learning and (3) requiring participants to continuously reflect on their practice. They all admit about 20-25 participants, which is the upper limit of small groups (Bogaard et al. 2005). Naturally, these result in not only a shared commitment to student-centeredness in the delivery of these educational development courses but also in the use of very similar teaching techniques, tasks, and assignments. Turning to SoTL is only natural when the aim is to motivate participants to base their practice in pedagogical theory and when participants are active researchers themselves. Similarly, the assessment of participant performance is primarily based on formative feedback. Since the goal of such feedback is to assist participants' in reaching the learning objectives at every stage of the courses and encourage participants to explore areas of their own interest

resulting in varying projects, all courses are pass/fail and focus on holistically assessing participants' assignments using a threshold for achievement, rather than assigning a numerical grade to participants' work.

Table 2. Similarities in course design of three educational development courses for doctoral students at MUNI/EUBA, the University of Tartu, and Lund University.

		MUNI/EUBA (nascent)	**University of Tartu (maturing)**	**Lund University (mature)**
Learning objectives		● Shift toward student-centeredness; ● Reflection on practice; ● Theoretically informed practice	● Shift toward student-centeredness; ● Reflection on practice; ● Theoretically informed practice	● Shift toward student-centeredness; ● Reflection on practice; ● Theoretically informed practice ● Engage in conversations with colleagues
No. of participants		20	20-25	25
Teaching Methods	Pair- and groupwork	Summer school sessions	Face to face sessions; Groupwork for adult learning workshop plan	Course week; Group project
	Lectures	Summer school sessions	Mini-lectures (Class sessions)	Course week
	Independent reading	Summer school sessions; Innovation reflection paper	Face to face sessions; Online coursework	Course week; Individual and group project
	Discussions	Summer school sessions	Class sessions	Class session week; Peer teaching session
	Mentoring	Formal (coach feedback on all assignment); Informal (coaches open to further dialogue)	Formal (facilitating peer feedback); Informal (educational developers open to discussions)	Formal (compulsory consultation about group project); Informal (optional consultations about group and individual projects)

	Microteaching	15-minute peer teaching about disciplinary topics with peer feedback	15-minute mini-lessons about disciplinary topics with peer feedback	10-minute peer teaching session about a teaching method
Use of SoTL		Innovation reflection paper	Commentary on class readings	Individual and group projects
Evaluation	Feedback	Formative	Formative	Formative
	Assessment	Pass/Fail	Pass/Fail	Pass/Fail
Criteria of passing		Attend all summer school sessions; Submit all assignments on time; Meet min. program goals for all assignments	Attend 80 % of classes; Complete all major assessment tasks	Attend 80% of course activities; Participate in class activity; Pass individual reflection paper and group project assignments

Although the similarities between the three courses reveal consistent strengths between them, identifying differences (see table 3 on next page) is likely more beneficial for uncovering the directions and steps that developers of newly established educational development courses should take in order for their courses to succeed in the long term. We have found several key differences between these three courses.

Each course has a somewhat distinct recruitment base that can be linked to the inception of the course. For the MUNI/EUBA course, the goal has been to create a university-wide course at both institutions. However, pre-grant application dialogue with the MUNI administration resulted in a decision to focus on one faculty—the Faculty of Social Studies. At EUBA, the course remained open to every doctoral student, where the overwhelming number of doctoral programs focus on social science disciplines. Overall, most participants were from social science disciplines, but applicants from other disciplines were also welcome. In Lund, the program has always been offered just to doctoral students at LTH, though spaces are occasionally available for a limited number of external participants. In Tartu, the course was established as part of a university-wide revision of

the curriculum for all doctoral students, and is therefore open to doctoral students at the entire university and occasionally attended by doctoral students from other universities. Unlike the current courses in Lund and Tartu, the MUNI/EUBA course is funded externally and is owned by the individual educational developers associated with the Erasmus+ grant project, Extending and Reinforcing Good Practice in Teacher Development, rather than by a local educational development unit. Due to large reliance on external expertise and the availability of relevant literature in that language, the course is run in English at MUNI/EUBA, whereas the compared courses in both Lund and Tartu are offered in the local languages as well as in English.

Table 3. Differences in course design of the educational development courses for doctoral students at MUNI/EUBA, the University of Tartu, and Lund University.

	MUNI/EUBA (nascent)	**University of Tartu (maturing)**	**Lund University (mature)**
Recruitment base	Social sciences (with some exceptions)	All university	Single Faculty (LTH)
Ease of recruitment	Difficult	Moderate	Unproblematic
Type	Elective	Elective	Mandatory
Length	1 academic year	1 semester	6 weeks
Graduation rate	67%	Approx. 90-95%	Near 100 %
Funding	External	Internal	Internal
Part of PhD program	No	Yes (Optional)	Yes (Compulsory)
PhD supervisor informed about participation	No	Indirectly	Required
Language	Non-native (English)	Native (Estonian) and non-native (English)	Native (Swedish) and non-native (English)
PhD students required to teach	Yes, some	No	Yes, some
Course ownership	Project developers	Institute of Education	Local educational development unit
Participant dialogue with local faculty	Minimal (application interview with experienced educator)	Minimal (optional interview with local faculty member)	Significant (discussing reflective paper with experienced colleague)

Although none of the courses is of workshop length as discussed above, they significantly differ in duration: six weeks (Lund): one semester (Tartu) and one academic year (MUNI/EUBA). In contrast with the courses in Tartu and Lund, the MUNI/EUBA course is not part of the PhD curriculum and participants' do not need their supervisors' approval to participate. In both MUNI/EUBA and Tartu the course requires little dialogue with local faculty, whereas entering into a teaching-related dialogue with an experienced colleague is a cornerstone of the Lund course. While PhD students are not required to teach at the University of Tartu at all, some PhD students are given teaching assignments at MUNI/EUBA and at Lund University. At Lund University, doctoral students with teaching assignments are required to take the introductory educational development course for PhD students, whereas doctoral students' participation is completely voluntary in the University of Tartu and the MUNI/EUBA courses.

There are also differences between MUNI and EUBA, with one or the other being more similar to Lund and Tartu in difference respects. At EUBA, as in Lund and Tartu, doctoral students may apply credit earned for completing the educational development course toward their PhD program requirements, while at MUNI, PhD programs only allow for credits accumulated in the PhD candidates' respective disciplines. MUNI is more like Lund and Tartu, however, in that it includes the importance of good quality teaching with modern teaching methods in its institutional mission, while EUBA's mission statement lacks such references.

In order to distinguish between differences that are meaningful and ones that are less so, it is necessary to look beyond the courses alone and consider the broader educational development initiatives/programs surrounding the courses and the impact that they have.

Impact of educational development courses at the individual level

The three courses have similar impact on course participants. Using Kreber and Brook's (2001) framework for impact, we consider all three to be successful on the first three levels—participants' perception of the PhD course, participants' conception of teaching and teaching performance (the first three rows in table 4 on the next page). Participants of the PhD courses were very satisfied with the course they took. Data from ten cohorts of participants show not a single dissatisfied doctoral student in Lund. Participants at MUNI/EUBA specifically emphasized the value of the online coaching aspect and said that they would recommend the course to their peers. Participants of the course in Tartu valued the practical nature of the course and the opportunities to discuss learning and teaching with colleagues (from other units), while they found consistency between what is taught and how it is taught convincing that student-centered teaching at the university is possible.

All three courses achieved their objective of shifting participants' conceptions of teaching to a more student-centred approach. (Andersson et al. 2013; Remmik and Karm 2013). The participants of the Erasmus+ funded program at MUNI/EUBA also progressed notably in using theories and showed minor improvements in the area of reflection. In Lund, a consistent increase in the quality of SoTL papers over time attest to reaching learning objectives related to student-centeredness, reflection, and use of theory. Hard data on whether or not participants of the Tartu course became more reflective or employ more theory by the end of the course do not exist, but we do know that participants value the reflection tasks, i.e. the opportunity to reflect on their personal learning as well on teaching experiences.

Table 4. Impact of the educational development courses for PhD students and related educational development programs/initiatives at MUNI/EUBA, the University of Tartu, and Lund University based on the six-level framework from Kreber and Brooks (2001).

Levels		**MUNI/EUBA (nascent)**	**University of Tartu (maturing)**	**Lund University (mature)**
1	Participant perceptions	Almost all participants found the PhD course useful and would recommend the course for their peers; Participants evaluated online coaching highly	Participants liked the course; Participants found the PhD course useful	Participants very satisfied
2	Participants' conceptions of teaching	Participants became more student-centered; Participants theoretical knowledge has improved significantly; Minor improvement in reflections	Participants' conceptions of teaching are more student-centered	Participants adopt a more student-centered conception of teaching; Written artifacts demonstrate an increasingly sophisticated use of SoTL principles
3	Participant's teaching performance	Participants became more confident teachers; Greater variation in participants' teaching methods including classroom activities and assessment	Over time PhD students use active teaching methods more frequently during microteaching; Faculty reported using more active teaching and learning methods, more structured group work and more complex assessment tasks	Faculty teaching has improved steadily over the past 15 years as measured by the Course Experience Questionnaire
4	Students' perceptions of teaching	Several participants received positive feedback on new teaching methods	University wide students' feedback is slightly higher than five years ago	Student evaluations of the good teaching block of the CEQ improved steadily over the past 15 years; All but one of the 20 departments improved in aggregate CEQ score for the last five years compared to the previous five years

5	Students' learning	When participants used new methods, in some cases an improvement in student learning was uncovered	[No data]	As measured by the CEQ, students increasingly use a deep approach to learning
6	Institutional culture	Educational development course served as an impetus at EUBA for creating new teaching and learning initiative, EduBreak; Participants' discussion with peers, faculty members*	New kind of teaching development activities have been implemented at the university; Revised, theoretically-informed student feedback questionnaire is implemented; Participants' dialogue with earlier course graduates; Principles of good teaching appear among university mission statement; Grants for SoTL activities	Academic teachers awarded the designation ETP place greater value on interactions with colleagues as a source of inspiration for developing teaching than those who have applied for ETP but not been awarded it; Leadership embraced principles of educational development presented in our pedagogical courses demonstrated in policy change; LTH's strategic plan prioritizes teaching over research and aims at a leading role education

* Good quality teaching is included in MUNI's mission statement and strategic plans, but this has been so before the beginning of the current grant project.

At the third level in Kreber and Brooks' (2001) framework, there is evidence that participants' teaching performance has improved across all three courses. In general, they have incorporated relevant theoretical and methodological knowledge into their practice. Specifically, several MUNI/EUBA course participants reported increased confidence—which is crucial for teachers in giving up control of the teaching process and move toward student-centeredness—and used new techniques and activities in their classroom. Since participants of the educational development course in Tartu are not assigned any teaching duties, the most immediate information about their

practice is the microteaching exercise during the course and where they have frequently used active learning methods. At a more general level, faculty—that come from former participants of the educational development courses for both PhD students and faculty members—over time reported using more active learning-teaching methods, more structured group work and more complex assessment tasks. However, if the impact of other courses on faculty-wide change in practice is undisputable, then so is that of the follow-up, community of practice activities, which were instrumental in implementing student-centeredness into everyday classroom practice. While no specific data is available about course participants' practice *per se* in Lund, there is a steady and almost linear increase over thirteen academic years in the aggregate score on good teaching in the Course Experience Questionnaire (CEQ) (Ramsden 2005), which is the student evaluation form used at LTH (Lund University does not have a single common student evaluation system). It is fair to assume that the educational development course for doctoral students has contributed to this positive change.

Analyzing the impact of the three educational development courses for doctoral students not only shows a clear impact on individuals in all cases, but also suggests that these courses influence individuals in symbiosis with other educational development activities. At Lund, for example, participants of the doctoral course may also be influenced by interactions with faculty members who are not part of the course but who have taken it or other pedagogical courses; they are also able to participate in regular teaching and learning conferences on campus, which may influence them further. This suggests that as a single pedagogical course matures and other educational development activities emerge surrounding and extending from it, the pure influence of the course can be difficult or even impossible to discern, and that change is perhaps better measured at an institutional level, rather than at an individual level. Therefore, to learn more about the differences in the educational development initiatives—and not only in the details and impact of the educational development courses for individual PhD students—at the three compared

universities, it is important to learn more about these initiatives as well as their impact. We have already shown that they do influence how individuals think about and practice teaching; in the next section, we show their influence at the institutional level.

Educational development programs: a comparative view at the institutional level

Masaryk University/University of Economics in Bratislava

The doctoral course is not the first educational development activity to include either EUBA or MUNI. There are always a few participants taking part in the Teaching and Learning Summer School of the European Consortium for Political Research (ECPR) from both universities A few participants affiliated with EUBA took part in the Slovakia-wide educational development course Teaching in Higher Education between 2010 and 2013. In 2015, the Teaching and Learning Politics and International Relations course was offered for one semester at Masaryk University due to support from an internal, Masaryk University Development Fund (FRMU) grant. It is also notable that at MUNI the university-wide Pedagogical Competence Development Centre (CERPEK) was established parallel to our efforts as a result of a different grant project. Although a direct relationship between these initiatives cannot be established within the institutions, the knowledge and expertise accumulated from the prior projects were utilized in course design and delivery and CERPEK served as an ally for course leaders of the course for doctoral students from MUNI and EUBA.

Despite a conscious effort to extend the reach of the course beyond course participants, it is not possible at present to speak of an educational development *program* at either MUNI or EUBA. We can, however, discuss educational development *activities* beyond the compulsory components of the course, Learning-Centered and Reflective Teaching: From Theory to Good Practice, to understand how the current state of the project compares to the two more mature programs.

We were aware of the risk of isolation that participants of brand-new educational development courses face when they return to their regular daily activities, so we looked for ways to support the growth of communities of practice for our participants (Wenger 1999). First, participants were offered the opportunity to observe each other's classes during the implementation of their teaching innovation and to have a candid discussion about it. Second, a coffee and cake meeting was organized at both participating universities late in the Fall semester, so that participants could share their teaching experience with each other. Third, there was a graduation ceremony for the course, where participants could come together a final time to receive their course certificate and reflect on their experience in and beyond the course.

We also looked for ways to increase the visibility of the course and to offer participants opportunities to showcase their work. Some of these targeted the local teaching environment. Firstly, if the participants agreed, we contacted their supervisors or department heads to describe the course, inform them about the participants' involvement, and ask for their support. Secondly, a 5-day workshop, Extending and Reinforcing Good Practice in Teacher Development: Training Program for New Educational Developers, was offered for interested educational developers at MUNI and EUBA, including a few graduates of the educational development course for PhD students as well as faculty members and administrators. It focused on learning to develop, run, and fund local educational development courses and initiatives.

Other initiatives targeted both local institutional and wider environments. The most prominent of these is a book edited from the revised innovation reflection paper of select participants, Early Career Academics' Reflection on Learning to Teach in Central Europe (Pleschová and Simon 2018). Not only was the publication opportunity attractive for (potential) participants, but the volume itself could be valuable for educators at MUNI and EUBA as well as for beginner practitioners in the respective two countries, the immediate Central European region, and around

the world. There were also several multiplier events, of which the most useful in influencing local institutional cultures were the ones held in Bratislava and Brno.[4] These events allowed local faculty to meet foreign experts, some of whom were involved with the project, learn about the course, and see the work of some of the PhD course participants.

University of Tartu

The current educational development course for PhD students as well as other educational development activities at Tartu was the result of a longer process starting in 2005, when the Center of Higher Education Pedagogy was established to support the development of university teachers' pedagogical skills. This center originally offered a pedagogical course for doctoral students—and a teaching practicum—taught by local faculty and a pedagogical course for academic staff mainly taught by guest professors from abroad and financed externally through a European Social Fund (ESF) grant project (Project LÜKKA).

In 2008, the Estonian Ministry of Education launched Project PRIMUS with funds from the European Regional Development Fund (ERDF) and ESF. The program's objective was to engage more people in educational development. As part of this, all Estonian state universities were required to develop the professional skills of faculty members engaged in teaching, and the University of Tartu was selected to host one of the two educational development centers established in the country. The Centre for Excellence in Teaching and Learning was formed as a university-wide institution and the Center of Higher Education Pedagogy was integrated into it. During this period a wide selection of courses was offered, including a foundational pedagogical course, short pedagogical course on various issues, and a presentation and communication skills

[4] Since 2011, Masaryk University also has a regular e-Learning conference, Open Space, organized by the Faculty of Informatics.

workshop. It was difficult to fill these courses with new faces, as they exceeded the ratio that could rationally be attended by new, interested faculty. Many international colleagues were invited to teach in Estonia to conduct workshops or to teach in Summer Academies or Winter Academies, and Estonian educational developers participated in international conferences and visited centers for educational development in other universities (in the UK, Ireland, and Finland, for example). It was also the time when the first international educational development conferences were organized in Estonia. A large number of foreign experts were invited to this conference, but few Estonian scholars participated. In addition, a series of handbooks on teaching skills were published in Estonian. Overall, the PRIMUS project was positive for educational development in Tartu. It helped not only to dissolve the earlier prejudice toward pedagogy, but also increased the visibility of teaching. As a result, it became an accepted practice among faculty to attend courses on teaching and learning in higher education, and the University of Tartu was able to establish good relationships with other Estonian and foreign universities.

Due to the visible benefits of educational development activities, the University of Tartu decided to continue offering additional funding for the program after project PRIMUS ended in 2014. educational development activities still rely on external funding from the ERGP, now in the form of Project ASTRA, but this comes with less funding. The post-PRIMUS era means fewer resources and, as a consequence, has resulted in an inevitable restructuring of educational development activities. Most significantly, there are now only two courses offered. One is the (revised) pedagogical course for doctoral students, which was not dependent on PRIMUS funding as it is part of the curriculum, and the other is a regular foundational pedagogical course for academic staff. Any additional available resources are used to organize one-time courses on topics like supervision skills, and short courses focusing on special themes (such as assessment, interactive lectures, group work, and course design). In the latter, the course participants from the University of Tartu are joined by a few colleagues from other Estonian higher educational institutions.

Additionally, and as a follow-up to pedagogical courses, a community of practice type of activity has emerged to support the development of university teachers' pedagogical skills and informal learning in cooperation with colleagues. These groups are organized according to disciplines (like physics or philosophy) or scientific areas (like social science, the humanities, or medicine) and led by an educational developer. The themes and issues addressed at group meetings are initiated by participants. The key activity of these communities of practice is peer observation of teaching based on a locally developed model.

In 2015, with inspiration from foreign colleagues, SoTL was introduced as a next step in expanding educational development activities. Each year, twelve faculty members can apply for a grant to study good teaching practices, with funding they can use both to develop their teaching and to present their SoTL papers at conferences. SoTL has also become more prominent in the pedagogical conferences and meetings taking place at the university. Where there previously were only single-day, Estonian-language events for local teaching staff, now the University of Tartu also hosts an annual nation-wide SoTL conference that welcomes academic from across Estonia.

Finally, due administrative restructuring in 2016, the Centre for Excellence in Teaching and Learning was renamed The Centre for Professional Development and relocated from the Centre for Lifelong Learning to the Human Resources Office, making educational developers administrators rather than faculty. It is too early to understand whether or not it affects how educational development is perceived by the faculty and university leadership as well as the impact of educational development.

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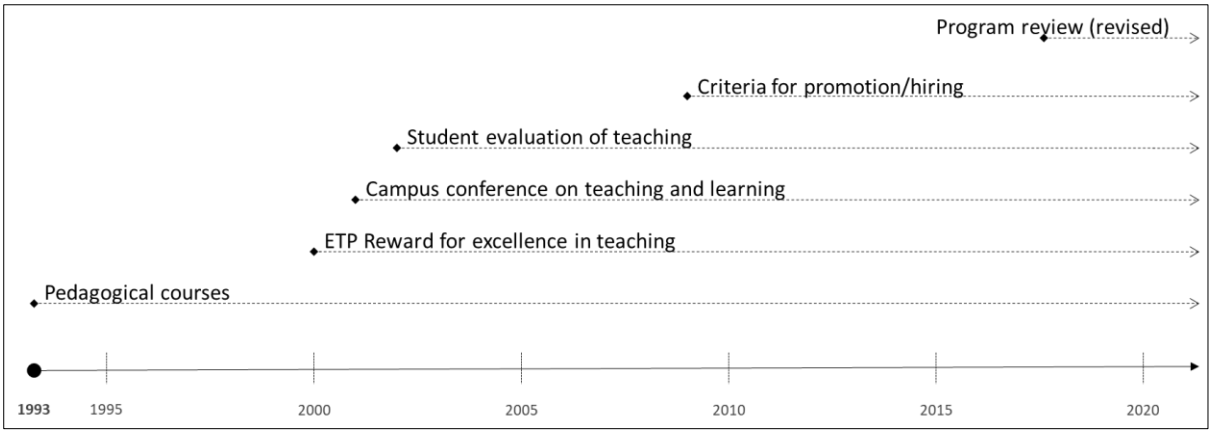
Lund University

The current educational development activities in the Faculty of Engineering at Lund University (LTH) go beyond pedagogical courses and include a range of other activities (figure 4) that have not only developed gradually over time, but have also seen continuous adaptation to the changing educational context and the needs of the faculty.

Figure 4. The gradual evolution of educational development activities at Lund University since 1993.



The academic development unit's inception was the result of a top-down political intervention in 1992, when Swedish higher education institutions received money dedicated for pedagogical courses for academic teachers. At the time, disinterest and even hostility towards educational research and pedagogy were common among both faculty and administration. Yet, educational development was not completely unfamiliar to Lund University: the university already had a small and somewhat overlooked educational development center, started in the 1970s. It was here that LTH turned for support in 1992.

educational development activities started in 1993 with the development of three courses at the Lund Centre for Educational Development: The Communication Course for PhD students, The Docent Course for senior researchers about to apply for docentships, and The Inspirational

Course for experienced teachers. Each of these courses has gone through various iterations to reach their current form. For example, The Communication Course for doctoral students has evolved into what today is the Introduction to Teaching and Learning in Higher Education described above, and another course called Communicating Science. These courses gained such popularity among faculty that when the government funding of educational development ended, the LTH leadership was compelled to fund these activities from their own budget. In 2005, pedagogical courses became compulsory for all faculty. With this transition, some of the more daring course activities within The Inspirational Course had to be abandoned, as the participant group shifted from eager volunteers to a wider and, on average, less engaged audience. New courses were also developed on writing teaching portfolios, gender in engineering education, student examination, designing and evaluating teaching from a disciplinary perspective, and improving lectures. Overall it is possible to discern a pattern where courses first are introduced in an original format and then evolve together with the organizational context.

The early attempts at introducing SoTL at the LTH were unsuccessful. The book, Classroom Assessment Techniques (Angelo and Cross 1993) inspired a course for teachers to investigate their own teaching. This course, called The Looking Glass, did not succeed due to insufficient interest from teachers. An initiative to support a group of teachers to develop a project and present it at the annual Improving Student Learning (ISL) conferences came too early for the LTH faculty to be able to capitalize on it. However, over time, all courses have incorporated features of SoTL and included a project where participants investigate and report on an instance from their personal experience as academic teachers. These written reports are published in a database accessible to all staff at LTH; today, the database contains more than 600 of these artefacts. As SoTL has become increasingly accepted in the faculty, an arena for scholarly conversations about teaching and learning was established in the form of The Pedagogical

Inspirational Conference in 2003. Usually 25-30 abstracts are accepted for presentation and about 100 people attend the conference each time.

Early attempts at recognizing teaching without offering a reward or support have been replaced by the Excellent Teaching Practitioner (ETP) award. This designation was introduced in 2001, and it comes with an increase in both the salary of the rewarded teacher and in the funding that teacher's department receives from the faculty. In 2005, ETP became part of the promotion process, and in the mid-2010s, senior management at Lund University as a whole decided to require pedagogical reflection from those being applying for promotion to professor. At LTH, policy set by the vice-dean for undergraduate education mandates that anyone seeking promotion should be able to reflect critically on his or her own teaching practice. Since 2018, it is only possible to be promoted to professor at LTH if you have completed 400 hours of pedagogical courses or have been awarded ETP.

Student evaluation of teaching (SET) is required by the Swedish government for all higher education institutions. In 2003, LTH launched a comprehensive system in form of the Course Experience Questionnaire (Ramsden 2005) to collect student experiences on courses. It has provided consistent and reliable information and formed the basis of critical discussions linked to quality claims. The CEQ offers a way of supporting a scholarly conversation about teaching and learning, a conversation engaging most academic teachers and students.

These developments have not happened in isolation at the LTH, as the university currently has three additional educational development centers: the university-wide center established in the 1970s, and one each at the Faculty of Medicine and the Faculty of Science. There are now about fifteen to twenty educational developers working at the university.

Comparative analysis of educational development activities

The different maturity of educational development activities in the four institutions—there are differences between MUNI and EUBA that need to be taken into account—means that the three educational development courses for PhD students are embedded in varying educational development environments. This has resulted in some similarities and many differences between these initiatives (for an overview see table 5 on the next page).

Similarities may be by accident or by design. It takes time and effort before educational development activities can become part of the life of a university. Lund University has had educational developers since the 1970s, and many of their early activities have built the foundation of the current tradition of educational development. Likewise, in Tartu, the current form of the educational development activities builds on a foundation of early initiatives that helped shape the emergence and nature of the current educational development program. Both MUNI and the EUBA have been exposed to educational development activities earlier, as discussed above, and these activities influenced the development of the course at MUNI/EUBA.

All three universities administer student course evaluations. In Tartu and Lund these are widely accepted and provide meaningful information to teachers and educational development researchers alike. They are good conversation starters and offer a simple way to exercise reflection on one's teaching practice. In Lund these are even taken into account during the promotion process. However, at MUNI, the online student questionnaires are completed by too few students, so they provide very little useful information and opportunity for reflection. At EUBA, it is department heads who control student evaluations, which are administered and shared with faculty at their discretion. Even if these are shared, they rarely discussed, which is a missed opportunity not only for a dialogue about teaching and learning but also for reflection and self-improvement.

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Table 5. Comparison of educational development initiatives and their local context at MUNI/EUBA, the University of Tartu, and Lund University.

	MUNI/EUBA (nascent)	**University of Tartu (maturing)**	**Lund University (mature)**
Educational development initiatives			
Prior educational development efforts	Teaching and Learning Politics and International Relations course (Fall 2015, MUNI); Center for Development of PhD. Students. Scholarly-based Education (2010-2013, EUBA); ECPR Teaching and Learning Summer School (biannually since 2014)	Center of Higher Education Pedagogy in the Faculty of Education (2004-2008); LÜKKA (2005-2008); PRIMUS (2008 – 2014)	First educational developers in Lund was hired 1970
educational development unit associated with its program	No	Yes The Centre for Professional Development	Yes Centre for Engineering Education
Additional course(s) for PhD students	No	Yes	Yes
Course(s) for faculty	No*	Yes	Yes
Training for educational developers	Yes	No formal training	Yes
External/International experts utilized	Yes, currently	Yes, initially.	No, internal experts only
Activities to support community of practice within institution	Coffee and cake meeting; Peer teaching observation (optional); Graduation ceremony; Informally connecting people	Local conference at university; Grant for SoTL activities; Learning communities of academics/faculty	Campus conference; Reward system for excellent teachers

Activities to build local support and visibility for educational development course(s) and activities	Letter of support for participant supervisors (optional); Local multiplier events at both universities; Cultivating relationship with CERPEK†	Courses are well known in the faculty; Occasionally articles on good teaching or excellent teachers or about conferences in university journal, Universitas Tartuensis	None. Activities are well known in the faculty
Activities to connect with educational development community	Book publication; Multiplier events abroad; Attendance of international disciplinary conferences by course participants and project managers	Local conferences; Local SoTL grants for organizing events for faculty, support faculty's attendance of conferences abroad	The database with more than 600 teachers' SoTL reports; The teaching and learning unit continuously publish research on activities in the faculty
Unsuccessful or discontinued activities	Letter to department heads/supervisor	Teaching practicum for doctoral students; Course and practice on mentoring; Course for future educational developers	Premature trial with SoTL activities in the 1990s.
Local context			
Faculty is required to attend educational development course	No	No	Yes
Student evaluation	Yes	Yes	Yes
Teaching award	No	No	Yes
Teaching merit influence promotion	No	Yes, from 2020	Yes
Support by university administration	MUNI: Yes. EUBA: Moderate.	Yes	Yes

* While the educational development initiative studied herein does not have courses for faculty, CERPEK does

† MUNI has already had the Masaryk University Development Fund grant for teaching and learning activities prior to beginning of the current educational development initiative

Similarly, administrations of all institutions provide monetary and other support to educational development activities although not to the same extent. The support is strongest in Lund, followed by Tartu, where educational development still partially depend on external funding. At MUNI, the administration takes interest in these issues as demonstrated by offering an internal teaching and learning grant (the FRMU mentioned above), participation, by being the driving force in the current and other cross-national projects on teaching and learning, and by offering continued moral support from the vice-rector for development. At EUBA, support is more moderate. For example, while they are glad to host the current project, it requires continued persuasion to obtain cooperation for various elements of the project. Although a few faculties understand the need for educational development activities, they have not yet managed to raise this to the level of policy, mostly due to lack of funding.

Some of the similarities are due to conscious efforts by educational developers at MUNI/EUBA, who considered prior knowledge and expertise accumulated through SoTL and, when possible, adopted them. However, activities at MUNI/EUBA tend to be less widespread, less acknowledged, and often voluntary, even for course participants. For example, while activities aimed at building communities of practice were primarily embraced in order to support the participants of the course, they also aimed at connecting current participants to their local institutional context. We did this by organizing local multiplier events at both universities, connecting our graduates informally with CERPEK, and having our graduates present at local conferences. Activities are rather different at both Tartu and Lund, who organize their own conferences regularly to this end, augmented by other customary activities like offering a grant for SoTL activities and creating and maintaining learning communities for faculty (Tartu) or rewarding excellent teachers for their work (Lund).

Similarly, all institutions work on connecting their teachers to the larger community of educational developers, but again not to the same extent. The MUNI/EUBA project published a SoTL-based book from the revised innovation reflection papers written by selected course participants, and encouraged participants to attend local and disciplinary conferences about teaching and learning. The program managers have also actively propagated the course through multiplier events abroad and by attending disciplinary and teaching and learning conferences. However, for educational developers in Tartu and Lund the regular conferences not only allow educational developers and teachers to engage in SoTL activities more often, but also already have strong networks of professional contacts with foreign colleagues. SoTL activities are further encouraged by the University of Tartu's grant to finance both SoTL projects that faculty members work on and/or the presentation of these projects at conferences, whereas Lund University has not only collected a large database of SoTL reports available for research but also regularly publishes research on faculty activities.

Unsuccessful initiatives often seen as a sign of failure, but these seem to be unavoidable part of a learning curve for educational development projects. Despite even the most careful assessment of local needs and possibilities, it may not always be foreseeable which educational development activities will not succeed or if a certain outcome should be pursued differently. For example, in the 1990s, the Lund program tried and failed to introduce SoTL activities. A different, more gradual approach proved successful instead, and now SoTL is firmly established in all aspects of educational development at Lund. Tartu tried to organize a course for future educational developers during the PRIMUS era, but this had to be abandoned as only few people applied and they lacked the necessary profile for such activities. Instead, Tartu adopted a peer mentoring program that has worked excellently. The MUNI/EUBA effort at building a community of practice in a primarily online environment did not reach its expected goals, but it might be successful with a different approach. However, without funding and time available for these activities, these

issues may not have come to the surface in time or at all. Furthermore, abandoning or redesigning courses are often not a sign of failure: they are not necessarily altered because they were of inherently faulty design. Tartu discontinued several courses due to losing external funding, and both at Lund and Tartu courses were redesigned to meet more closely the altered needs of the faculty. Furthermore, since Lund's educational development program has developed mostly parallel to the development of the field of SoTL, reorganization of the educational development curriculum was done to incorporate new developments in the field.

There are fewer differences between the Tartu and the MUNI/EUBA initiatives than between the MUNI/EUBA and Lund projects most likely because they are closer in age and have a more similar historical background. For example, Lund has always had access to and used local educational developers. Both Tartu and MUNI/EUBA, by contrast, have relied on external and/or international experts. For Tartu, this was necessary in the early stages of educational development activities to overcome the challenge of gaining sufficient expertise in the rapidly expanding field of SoTL. Today, Tartu has transitioned to employing only local educational developers. The Erasmus+ project at MUNI and the EUBA has been designed and run with substantial contribution from international educational development experts for similar reasons. Furthermore, at Tartu, MUNI, and EUBA, pedagogical courses are optional, there is no award honoring good quality teaching, and reflection on teaching and learning is not part of promotion. In contrast, participation in educational development courses are mandatory for Lund University faculty and teaching excellence is not only rewarded through the ETP designation but also necessary for promotion.

The new initiative at MUNI/EUBA differs from both Tartu and Lund especially in areas that come with maturity: both Tartu and Lund offer additional educational development courses for both doctoral students and faculty, which is not the case at MUNI and EUBA. Similarly, educational

developers work in educational development units in Lund and Tartu—the Centre for Engineering Education and The Centre for Professional Development, respectively—whereas project-affiliated educational developers at MUNI and EUBA are based in their disciplinary departments as no single unit exists that would coordinate all educational development activities either at faculty or university level. Nonetheless, CERPEK, which was created independently from the grant project analyzed herein, could potentially serve as such a body in the long run at MUNI. Interestingly, formal training has been suggested for educational developers both at Lund University and at MUNI/EUBA, while after the earlier unsuccessful attempt at a training course, Tartu uses an informal mentoring process for this purpose.

Finally, the area that reflects the maturity period of the three compared initiatives most strongly is the need for and existence of activities that gain visibility and recognition for educational development among the faculty. At Lund, the educational development activities are so well known among faculty that the Center for Engineering Education need devote energy to further efforts in this area. In Tartu, courses and most activities are widely known, but The Centre for Professional Development still uses the university's journal to feature examples of good teaching and good teachers and propagate local conferences. At both MUNI and EUBA, significant effort has been devoted to gaining visibility and recognition but, as shown below, there is yet much to be done.

Impact of educational development activities at an institutional level

Since there is greater variation in educational development activities overall across the three contexts than there is in the designs of the PhD courses, their impact is also more variable across the institutions as demonstrated by the analyses of levels four to six of Kerber and Brooks' (2011) framework (table 4). At these levels, instead of looking at the impact of a single—or even more

than one—course on its participants, we look at how institutions are affected by educational development including perspectives and learning of students and the evolution—or lack thereof—of institutional culture in this area.

What is striking about the institutional-level analysis is the paucity of data. For example, MUNI and EUBA have only isolated pieces of data about student perceptions and learning, even for the student population that was exposed to the new ways of student-centered teaching via the work of our course participants. Tartu has no hard data on student learning. Despite this, some trends can be noticed.

First, students tend to appreciate the new ways of teaching. Tartu and Lund this has been supported by an overall increase in the student evaluations in the last few years. No such comprehensive data is available for MUNI and EUBA—due to the abovementioned inconsistency in administering and distributing student evaluation data—but those course participants who collected such data for their analyses got positive feedback and also observed a more eager attitude from their students in class. Second, the impact of the new methods on student learning at MUNI and EUBA is more mixed, but these methods perform at least as well as traditional teaching-centered methods, often better. In Lund, students increasingly demonstrate a deep approach learning, which attests to the effectiveness of the student-centred teaching methods, and thus indirectly to the impact of educational development activities.

Third, the maturity of the three initiatives is directly related to the impact of educational development programs/activities on institutional culture: the older the program, the stronger the cultural impact. Educational development principles at Lund University have been embraced by the university leadership and appear at the policy level, including making educational development compulsory, introducing the ETP designation for good quality teaching, including teaching in promotion requirements, and using a practical, research-based, and institution-

specific student evaluation form (CEQ). LTH faculty actively seek to improve themselves and they regularly discuss issues of teaching and learning with each other. Student voices are heard through both an extensive student evaluation of courses and through a long tradition where student representatives in all courses are essential participants in reviewing and summarizing evaluations for every instance of every course.

The University of Tartu seems to be on a similar road. Educational development is recognized at the university to a large extent, although pockets of resistance do remain. Participants of current and earlier teaching and learning courses—which is now a substantial proportion of the faculty—seek out and continue a dialogue with each other. The university leadership supports educational development through its use of a theoretically-informed feedback questionnaire and continued—although limited—financial support for educational development activities.

At both MUNI and EUBA, participants of the doctoral course and the future developers course seek out each other—and colleagues at CERPEK at MUNI—forming tiny pockets of educators that ally themselves with each other in order to improve the quality of teaching in institutions with vastly different educational cultures. Participants' discussions with their course leaders, supervisors, or even the dean also important to mention. At EUBA, these dialogues have culminated in a new teaching and learning initiative, EduBreak, which is a regular informal forum for talking about issues of teaching and learning among all interested faculty. educational development activities remain voluntary and have thus far had little influence on policy at either institution. Considering the results of our analysis of impact at different levels and the implications of similarities and differences between the three contexts in this study, we have identified a series of issues that could potentially contribute to educational development becoming more accepted among both the faculty and administration at MUNI and EUBA. We present these in the next section of this report.

Discussions and conclusion

Educational development courses that remain short-lived, isolated events may at best change the thinking and practice of a few pioneers, and then perhaps only temporarily. It is only possible to successfully address the need that such initiatives are intended to meet if the impact is lasting and effects a cultural change locally at the university (Ginns et al. 2010; Van Schalkwyk et al. 2015; Trowler and Cooper 2002; Trowler 2008; Roxå and Mårtensson 2009; 2015; Roxå et al. 2011; Heinrich 2016). To that end, courses also need to establish a relationship with institutional management (Stensaker et al. 2017; Bamber and Stefani 2016; Spowart et al. 2017). It is this aspect, together with local embeddedness and visibility of the educational development activities, that currently differentiates the MUNI/EUBA project from the educational development initiatives at the University of Tartu and Lund University. Below, we have listed four ways in which nascent educational development initiatives—including those still in the planning stage—may become not only sustainable but widely accepted in an institution of higher education.

Going local: language and educational developers

The first two issues are about gaining a greater embeddedness for course(s) and other educational development activities. First of these is the question of the language of instruction and communication. Both Tartu and Lund have had the advantage of running courses in the local language from the beginning.[5] Some may be interested in improving their teaching and their students' learning but are not able or willing to attend a course or present at a conference in a foreign language or specifically in English. Three MUNI/EUBA participants dropped out of the

[5] This is, however, not an argument against having the course also run in English. It has been done at both Tartu and Lund and in the current era of internationalization of the curriculum and the faculty this is a good way to serve non-native speaker faculty members. A review of the relevant literature is also attached among the supplements. Nonetheless, the local faculty remains the majority.

program during the online coaching segment; although the participants themselves cited different reasons; their coaches felt that English proficiency also played a role in their decision to leave the program. This would likely not have been an issue if the course had been run in the local languages.

Cultural change within an institution also concerns the way that members of the organization speak about an issue. If educational development is pursued in English, it makes these discourses harder: either the English terminology should or translations should be used. However, confusion can arise if multiple translations of a single concept appear, and this could make it more difficult to establish a strong new discourse about quality teaching and learning. Without a single dominant discourse, it might take longer for teachers to realize they share common concerns and interests. Preparing educational development course books in the local language can be a way in which these courses can be more effective and can help a uniform discourse emerge.

Second, pursuing educational development activities in the local language is only possible if a sufficient number of well-prepared educational developers are present in a given institution. This is a challenging issue in Slovakia and the Czech Republic, and in the wider Central and Eastern European region. This greatly influenced this Erasmus+ grant project's choice to rely on foreign expertise in the stages of course design and teaching (coaching) and to run one of the multiplier events in English. Tartu's example shows that using foreign experts can grant credibility to the project and break the resistance of faculty who are convinced that their teaching already meets 21st century demand. However, the nearly exclusive reliance on these experts has the disadvantage that the initiative will always be seen as imposed upon the institution from the outside. Tartu has overcome this by having foreign and local experts collaborate, the latter of whom were first trained by their foreign counterparts and who, with time, took over educational development entirely. This is a model that nascent educational courses may adopt.

Indeed, the EUBA/MUNI project has made the first step in this direction by focusing on the training of future developers, which included both those who are primarily interested in good teaching practice and those who are more interested in bringing about an institutional policy change. Considering the development of other elements of the project, holding the training toward the end of the three-year grant period was well timed because connection with interested local individuals could be established and the outstanding participants of the doctoral course could also be recruited. At the same time, it came too late for the project to benefit from the expertise of these newly trained individuals. An earlier training in this sense could have been beneficial, but it could easily have encountered the same challenges that Tartu faced, especially in terms of insufficient and underprepared applicants. Though these are relevant challenges, the fact remains that training additional local educational developers is key.

Visibility: local (multiplier) events and organizational hub

Holding multiplier events as part of the EUBA/MUNI initiative was a requirement of the grant agency. The purpose of these has been to disseminate the project outcomes beyond the consortium of project partners. Given the funding rules for these events, the grant agency favored participation of individuals from other institutions over project partners. From the point of view of the internal institutional visibility of the course, the two local multiplier events—one at MUNI and one at EUBA—proved more beneficial. It brought in some interested individuals who could, in the long term, become trusted allies or educational developers themselves. More of these would be useful.

For propagating the course locally, smaller but more frequent events were even more practical. These could make educational development better known and more widely appreciated at the universities by attracting faculty and policy makers who either cannot commit a lot of their time

but are open to new ideas in teaching and learning, or want to get some exposure before committing themselves or their academic teachers to a multi-day training workshop or a one-year program. The higher the number of attendees, the more likely that word will spread about the teaching and learning initiative.

In this vein, both Lund and Tartu have regular conferences related to SoTL type activities. These can be imitated by nascent educational development programs, albeit on a smaller scale. MUNI already has a grant scheme for course revisions, but both MUNI and EUBA could benefit from a scholarship opportunity that would cover the costs of presenting at an international conference and/or publishing in a reputable peer-reviewed journal about teaching and learning for one or two individuals per semester or per academic year. This would allow faculty members connect to the larger international community and help find their voice among them. This would also support SoTL activities at the university, and perhaps scholarship holders could be required to hold a public lecture in their home institution. Publishing in campus- or faculty-wide electronic or printed resources could be also beneficial, as the example of Tartu shows.

Local structures also have to be established in order for the long-term success of educational development courses and for educational development in general to impact more individuals and the university's teaching culture more broadly. In both Tartu and Lund, educational development activities are concentrated in dedicated a teaching and learning center that creates a clear structure of responsibility and accessibility, even if there are only a few employees. For example, if a specific unit—rather than select individuals dispersed over various academic departments—has ownership over educational development courses and other activities, it is easier to identify where to turn to if one wants to know more about these issues. Institutional inertia is such that an organizational unit once created is likely to stay for a long time, especially if it is filled with meaningful content that serves the interest of both faculty and students. Lund's example shows

that relatively little impact and significance is not a reason for abolishing the center: the somewhat isolated educational hub established in the 1970s was extremely useful in providing expertise when the Faculty of Engineering made a commitment to educational development in 1992. This is another reason to have local educational developers trained even when interest in educational development activities are minimal or the higher education institution has not made a substantial commitment to supporting these activities.

Such a center may be a completely new unit or it could be created in cooperation with an existing one, and the unit could serve an entire university, like the Center for Professional Development in Tartu, or just a single faculty like the Center for Engineering Education in Lund. It is probably advisable to avoid simply entrusting these activities to existing departments of pedagogy, since they historically focus on teaching in elementary and secondary schools, and this may result in prejudice as the needs of teaching and learning in higher education are different. Lund and Tartu have avoided this problem by creating new units. Since these prejudices are common in Central Europe—at EUBA, even the members of the Department of Pedagogy themselves recognize them—it would probably be advisable to create a separate unit, perhaps with a name that does not include the word 'pedagogy'. It would, however, not be advisable to squander the expertise that exists in departments of pedagogy, since members of these departments are also university employees interested in and knowledgeable about teaching and learning issues. They could augment the personnel at the educational development center. A model like this has worked very well in Tartu.

In case of MUNI, CERPEK—which was founded under a different initiative that was pursued parallel to the grant project studied herein and has nearly identical educational objectives—could be one such unit. This unit initially focused on providing faculty with a foundational educational development course, but it has recently opened space for PhD students as well. For Tartu and

Lund, targeting both PhD students and faculty members contributed to the spread of educational development within the institution. Although doctoral students are possibly the most receptive to educational development courses and therefore a very important target group of any educational development initiatives, training doctoral students has the disadvantage that they often only stay at a given university for the duration of their degree program, after which time they often move elsewhere (and may even leave academia altogether). This means they are more likely to be isolated and perhaps un(der)appreciated pioneers. The pressure to conform to established practice may be too strong for these pioneers, and over time they may give up the effort to teach differently from their peers and superiors. Even if they do stay at the same university after graduation, it will take time for them to establish themselves and climb high enough in the academic hierarchy and reach the critical mass required to effect real faculty- or university-wide cultural change. It is therefore important for long-term success to look beyond PhD students and also involve more established members of faculty as participants in educational development courses and activities. This would likely mean having a variety of activities, both common and separate, though a center that could harmonize all educational development courses would likely be most beneficial.

This is a costly enterprise, and if such a center is not feasible due to a lack of resources, then possible agreements with a few departments to train all their faculty and doctoral students could be fruitful. The number of impacted individuals may be small, but because they are concentrated in specific departments, reaching critical mass to effect change might be easier.

Final remarks

To conclude this report, we believe three caveats are in order. First, good-quality educational development courses—and thus good reputation—are necessary but not sufficient conditions for

impact, and thus, these were taken for granted. Second, when issues arise, there will be different ways of addressing them, depending on their origin, nature, and context. The examples of Lund and Tartu illustrate this, and show that it is also important to adapt to the local environment. Third, good planning and relentless work toward institutional impact may shorten and smooth the path to an institution-wide transition to good practices of teaching and learning, but not all factors can be the results of work by university-based educational developers. On the one hand, both the University of Tartu and Lund University benefitted from a top-down national initiative in establishing their educational development programs. Lacking such a policy environment, an entirely bottom-up approach can be also successful and learn from these other two initiatives, but this approach will probably have a bumpier road to success. With time, however, it is likely that bottom-up efforts will be supplemented by top-down impetus coming from the university leadership or the government, as Tartu and Lund exemplify.

It is also important to recognize that even in the most favorable circumstances, it will take time for the initiatives to run their course and prove their usefulness. The three-year length of regular grant projects is likely too short in this respect, although if the basics are in place—as is the case after three years of educational development groundwork at MUNI and EUBA—at least another three to five years are needed to see a more visible institutional impact, i.e. one that is similar to where Tartu is currently. Of course, the exact time needed for program maturation depends significantly on the amount of institutional interest and support and will that exist, and, in case of continued resistance or disinterest, could take fifteen years to catch up to the current level of educational development in Tartu.

References

Angelo, T.A. and Cross, K.P. (1993) *Classroom assessment techniques: a handbook for college teachers*, San Francisco: Jossey-Bass.

Alvesson, M. and Kärreman, D. (2007) 'Constructing mystery: empirical matters in theory development', *Academy Management Review* 32:4, pp. 1265-1281.

Amundsen, C. and D'Amico, L. (2019) 'Using Theory of Change to evaluate socially-situated, inquiry-based academic professional development', *Studies in Educational Evaluations* 61, pp. 196-208.

Andersson, R., Ahlberg, A., Diehl, A. and Price, L. (2013) 'Investigating the effects of academic development on novice teachers' conceptions of teaching in HE', Paper presented at the *41st SEFI Conference*, 16-20 September, Leuven, Belgium.

Bamber, V. and Stefani, L. (2016) 'Taking up the challenge of evidencing value in educational development: from theory to practice', *International Journal for Academic Development* 21:3, pp. 242-254.

Bartlett, L. and Vavrus, F. (2017a) 'Comparative case studies: an innovative approach', *Nordic Journal of Comparative and International Education* 1:1, pp. 1–14.

Bartlett, L. and Vavrus, F. (2017b) *Rethinking case study research: a comparative approach*, New York and London: Routledge.

Bickerstaff, S. and Cormier, M. (2015) 'Examining faculty questions to facilitate instructional improvement in higher education', *Studies in Educational Evaluation* 46, pp. 74-80.

Biggs, J.B. and Tang, C. (2007) *Teaching for quality learning at university*, 3rd ed., Maidenhead: McGraw Hill Education and Open University Press.

Bogaard, A., Carey, S.C., Dodd, G., Repath, I.D. and Whitaker, R. (2005) 'Small group teaching: perceptions and problems', *Politics* 25:5, pp. 116-125.

Centola, D. (2018) *How Behaviour Spread. The Science of Complex Contagions*, Princeton: Princeton University Press.

Chalmers, D. and Gardiner, D. (2015) 'An evaluation framework for identifying the effectiveness and impact of academic teacher development programmes', *Studies in Educational Evaluation*, 46, pp. 81-91.

Chalmers, D., Stoney, S., Goody, A., Goerke, V. and Gardiner, D. (2011) *Measuring the effectiveness of academic professional development. Identification and implementation of indicators and measures of effectiveness of teaching preparation programs for academics in higher education.* Final Report, Teaching Standards Framework Project (Ref: SP10-1840), Australian Learning and Teaching.

Duschinská, K. and High, R. (2018) 'Program Rozvoje pedagogických dovedností na Univerzitě Karlově: Didaktika vysokoškolské výuky a přesahy do dalších discplín [Educational competences development program at Charles University: didactics of university teaching and overlaps with other disciplines]', presented at the Erasmus+ multiplier event *Odborný seminár Profesionálne vzdelávanie VŠ učiteľov na Slovensku a v Česku* [Seminar on professional education of university teachers in Slovakia and the Czech Republic], 25 October, Bratislava, Slovakia.

Ginns, P., Kitay, J. and Prosser, M. (2010) 'Transfer of academic staff learning in a research-intensive university', *Teaching in Higher Education* 15:3, pp. 235-246.

Hanbury, A. Prosser, M. and Rickinson, M. (2008) 'The differential impact of UK accredited teaching development programmes on academics' approaches to teaching', *Studies in Higher Education* 33:4, pp. 469-483.

Heinrich, E. (2016) 'Teaching groups as midlevel sociocultural contexts for developing teaching and learning: a case study and comparison to microcultures', *Higher Education Research and Development* 36:4, pp. 702-715.

Kreber, Carolin. and Paula Brook (2001) 'Impact evaluation of educational development programmes', *International Journal for Academic Development* 6:2, pp. 96-108.

Lamers, A. and Admiraal, W.F. (2018) 'Moving out of their comfort zones: enhancing teaching practice in transnational education', *International Journal for Academic Development* 23:2, pp. 110-122.

Marton, F. and Booth, S. (1997) *Learning and awareness*, Mahwah, NJ: Lawrence Erlbaum Associates.

Meizlish, D.S., Wright M.C., Howard, J. and Kaplan M.L. (2018) 'Measuring the impact of a new faculty program using institutional data' *International Journal for Academic Development 23:2, pp. 72-85.*

Moya, B., Turra, H. and Chalmers, D. (2019) 'Developing and implementing a robust and flexible framework for the evaluation and impact of educational development in higher education in Chile', *International Journal for Academic Development* 24:2, pp. 136-155.

Olsson, T. and Roxå, T. (2013) 'Assessing and rewarding excellent academic teachers for the benefit of an organization', *European Journal of Higher Education* 3:1, pp. 40-61.

Pleschová, G. and Simon A. (eds.) (2018) *Early career academics' reflections on learning to teach in Central Europe*, London: SEDA, available: https://www.seda.ac.uk/Early-career-academics-reflections-on-learning-to-teach-in-Central-Europe, accessed 15 September 2019.

Postareff, L., Lindblom-Ylänne, S. and Nevgi, A. (2007) 'The effect of pedagogical training on teaching in higher education', *Teaching and Teacher Education* 23:5, pp. 557-571.

Ramsden, P. (2005) *Learning to teach in higher education* (2nd ed.), London: RoutledgeFalmer.

Reimann, N. (2018) 'Learning about assessment: the impact of two courses for higher education staff', *International Journal for Academic Development* 23:2, pp. 86-97.

Remmik, M. and Karm, M. (2013) 'From teaching to guiding learning: novice university teachers' conceptions of teaching and learning', in E. Saar and R. Mõttus (eds.) *Higher education at the crossroads: the case of Estonia*, Frankfurt am Main: Peter Lang Verlag, pp. 199-216.

Roxå, T. and Mårtensson, K. (2009) 'Significant conversations and significant networks – exploring the backstage of the teaching arena', *Studies in Higher Education* 34:5, pp. 547-559.

Roxå, T. and 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, pp. 193-205.

Roxå, T., Mårtensson, K. and Alveteg, M. (2011) 'Understanding and influencing teaching and learning cultures at university: a network approach', *Higher Education* 62:1, pp. 99-111.

Saroyan, A. and Trigwell, K. (2015) 'Higher education teachers' professional learning: process and outcome', *Studies in Educational Evaluation* 46, pp. 92-101.

Simon, E. and Pleschová, G. (2013) 'Creating successful teacher development programmes', in *Teacher development in higher education: existing programs, program impact, and future trends*, New York and London: Routledge, pp. 274-297.

Spowart, L., Winter, J., Turner, R., Muneer, R., McKenna, C. and Kneale, P. (2017) 'Evidencing the impact of teaching-related CPD: beyond the 'Happy Sheets'', *International Journal for Academic Development* 22:4, pp. 360-372.

Stensaker, B., van der Vaart, R., Dyrdal Solbrekke, T. and Wittek, L. (2017) 'The expansion of academic development: the challenges of organizational coordination and collaboration', in B. Stensaker, G. Bilow, L. Breslow and R. van der Vaart (eds.) *Strengthening teaching and learning in research universities. Strategies and initiatives for institutional change*, London: Palgrave Macmillan.

Stes, A., Clement, M. and Van Petegem, P. (2007) 'The effectiveness of a faculty training programme: long-term and institutional impact', *International Journal for Academic Development* 12:2, pp. 99-109.

Stewart, M. (2014) 'Making sense of a teaching programme for university academics: exploring the longer-term effects', *Teaching and Teacher Education* 38, pp. 89-98.

Trowler, P. (2008) *Cultures and change in higher education. Theories and practice*, Gordonsville: Palgrave Macmillan.

Trowler, P. and Cooper, A. (2002) 'Teaching and learning regimes: implicit theories and recurrent practice in the enhancement of teaching and learning through educational development programmes', *Higher Education Research and Development* 21:3, pp. 221-240.

Vanderziel, J.A., Sucháček, P. and Čejková, I. (2019) 'Center for Teaching Excellence: Origins and Future Potential', presented at the Erasmus+ multiplier event *Enhancing university teaching and learning in Central Europe. A conference*, 21 February, Brno, Czech Republic, available at https://qualityteaching.euba.sk/www_write/files/events/vanderziel_brno_21_feb_2019.pptx, accessed 3 September 2019.

Van Schalkwyk, S., Leibowitz, B., Herman, N. and Farmer, J. (2015) 'Reflections on professional learning: choices, context and culture', *Studies in Educational Evaluation* 46, pp. 4-10.

Van Waes, S., Van Bossche, P., Moolenaar, N., Stes, A. and Van Petegem, P. (2015) 'Uncovering changes in university teachers' professional networks during an instructional development program', *Studies in Educational Evaluation* 46, pp. 11-28.

Wenger, E. (1999) *Communities of practice. Learning, meaning, and identity*, Cambridge: Cambridge University Press.

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Supplement 1: Impacting higher education institutions through academic development – lessons from the literature

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Output O4-a: A comparative study of two programs for teachers in higher education and their outcomes

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Introduction

Academic development, also called staff development or educational development, is a practice that aims to improve the quality of higher education and has become an integrated part of many higher education organisations worldwide. It involves a broad range of activities that can vary greatly across different contexts, which can be a strength but also means that it is difficult to describe the field. However, one recurrent theme is that academic developers work together with academic teachers with a purpose of improving teaching.

In most cases academic development is financed by the institution to which it belongs, though it is not uncommon for newer initiatives to be financed by external grants. Regardless of how they are funded, the investment required to support academic developers and the work they do makes it natural to wonder whether academic development is worth the cost. This report takes a broad approach to this question: how does academic development actually impact practices, employees, and students?

Background

Pedagogical courses or workshops for academic teachers have existed in organised form in the United Kingdom, Scandinavia and North America since the 1960s (Gibbs 2013; Sorcinelli et al. 2006; Mårtensson and Roxå 2018). In the beginning, these activities were performed in the margins of higher education organisations together with teachers with a special interest in teaching. Most academics did not take part in or pay attention to these activities. Academic developers often saw themselves as politically subversive (Lee et al. 2010), taking sides with teachers and teaching against traditional academic values where research was favoured.

What began as short, voluntary activities have grown into mandatory systems aiming to develop teaching in all parts of the world. Today the global conference in the field, the International Consortium for Educational Development (ICED), regularly gathers over 500 academic developers from all over the world to discuss experiences of trying to enhance the quality of academic teaching.

Even though the activities offered to a large extent still gravitate towards professional development of academic teachers through courses and workshops, many additional features have been added to educational development practices: systems for rewarding excellence in teaching (Olsson and Roxå 2013; Gunn and Fisk 2013; Land and Gordon 2015); involvement in strategic planning within institutions (Gibbs 2013); quality assurance activities, like student evaluations of teaching (Alhija 2017); consultation in relation to curriculum development (Sutherland and Hall 2018); and leadership courses for local leaders (Roxå and Mårtensson 2015). The list can be even longer for what academic developers do. What started as a practice in the margins of higher education has grown into a thriving industry deployed to develop and secure quality in academic teaching in the modern era of mass education.

As a result, academic developers have become entangled in the fabric of the institutions providing funding for their activities (Peseta 2014). A subsequent imperative is placed on them to prove their worth (Bamber and Stefani 2016; Beach et al. 2016; Kolomitro and Anstey 2017; Stensaker et al. 2017). Do academic developers contribute to the development of teaching as expected? Do the services of academic developers have a positive impact on the organizations that fund them? Or, as Sutherland and Hall (2018: 69) recently put it: ‘does what [academic developers] do change the practice or conceptions or learning of the people for whom they are doing it? And are these changes sustained and sustainable?’.

A varied world of academic development

The background given so far draws primarily on experiences gained in parts of the world where academic development and professional development for academic teachers have been established for many years. However, many other places have taken up this practice more recently, and today pedagogical workshops and courses are offered to academic teachers within institutions where there is little or no tradition of doing so. In a way these institutions and these academic developers are professional beginners. They are beginners in the sense that they strive to establish professional development programs in contexts and cultures where these things still are alien or at least very new. But they are also professional in the sense that they draw on experiences from other parts of the world where the same practices have existed for a long time.

The idea of drawing on experience from other, more established contexts does not imply that academic development in professional beginner contexts should simply copy what others have done. Institutions necessarily relate to unique national contexts and legislation, as well as both established and new academic traditions. Professional development has to be adapted to these unique features in each new context. There is no single correct way to do this, and the choice of strategy and responsibility for executing it often falls on local professional beginners in academic development.

Considering this, it is apparent that experienced and expert academic developers would do well to pay attention to the need for translation and adaptation into new contexts when they produce accounts of their experience. There therefore is an inherent value in literature that sheds light on processes where professional development evolves over time, and how these processes are similar and different across contexts.

Purpose of this text

Academic development programs evolve over time, so it is reasonable to suppose that they impact the organisations to which they belong in different ways depending on how mature they are. To organise a pedagogical course for interested teachers is a common way to start. The impact from this type of intervention will very likely be different from the impact of a program that includes mandatory pedagogical courses, systems for rewarding excellent teachers, and promotions criteria with a focus on pedagogical merits.

Most of the literature on impact has concentrated on methodological issues related to difficulties in linking participation in pedagogical courses to changes in teaching behaviour and subsequent improvement in student learning (Stes et al. 2010; Sutherland and Hall 2018). Even though this is an important issue, we argue in this paper that we should expand the discussion to explore a wider view of the impact that can be observed in a mature academic development program. It has been argued that there is a shortage of this type of study (Chalmers et al. 2011).

Since academic development programs vary so much in age and maturity, there is also a need to discuss *how* programs evolve and what impact can be expected at various stages of maturity. There is a need to study this longitudinally (Chalmers and Gardiner 2015).

The purpose of this report, then, is to take up the following challenges:

1) What constitutes impact from mature and complex academic development programs?
2) How does impact change as a program for academic development matures?

Previous research

Historical developments

In the early days of pedagogical courses, it was enough if participants showed up and left satisfied. Often the same individuals came back for more, and the tendency was to organise events for the few who had 'seen the light'. It was hard to reach more people. But there were also acute problems that had to be handled. In the UK during the 1980s, student numbers grew, which led to a demand for teaching methods that could help teachers cope with larger classes. Events were evaluated mainly with so-called 'happy sheets', which were essentially participant satisfaction questionnaires. If participants left with an experience, they felt was meaningful, that was enough. Over time, however, and as academic development activities became more elaborate and more costly, interest grew in seeing whether these activities actually influenced teaching practice, and if so, whether that resulted in better student learning.

In early studies of this question, Angela Ho and her colleagues followed the effects of a short course on how to teach all the way to students' approaches to learning, and they show changes in approaches to learning among the students of teachers who had participated in the course (Ho 2000; Ho et al. 2001). Gibbs and Coffey (2004) described similar effects in a much larger international study that included 235 participants in pedagogical courses at 22 universities in eight countries. This study looked for long-term effects by surveying the participants' conceptions of teaching before the course and one year after the course. It also included a small control group of teachers who did not participate in the course, and looked for effects on student learning by surveying participants' students as well. The result supported the following conclusions: a) pedagogical courses can impact teachers' ideas about teaching, i.e. teachers can become more student focused; b) pedagogical courses can impact teachers' ways of teaching according to a student-focused conception; and c) pedagogical courses can impact teachers' teaching methods so that their students improve their learning towards a deeper approach to learning.

Since these two examples were published, much of the literature reveals an emphasis on methodological issues in researching the links between participation in pedagogical courses and effects on student learning. Stes et al. (2010: 48) report from a literature review on the impact of academic development in higher education and conclude:

> 'With regard to the nature of research, our synthesis reveals that more attention should be given to studies researching behavioural outcomes, thereby drawing not only on self-reports of participants, but also measuring actual changes in performance. Attempts to capture the effects at an institutional or student level would be very worthwhile as well. Much insight could be gained from well-designed studies with a pre-test, a quasi-experimental character and/or using a mixed-method approach. The long-term effects of instructional development remain a terrain for future study too. Use of the same instruments would facilitate the comparability of research results as well as make it easier for studies to build upon one another. Our synthesis gives some evidence that the duration and the nature of instructional development influence its impact'.

The call they make is mainly methodological, for a move beyond self-reported outcomes to instead capture behavioural changes among those participating in pedagogical courses, and to conduct both studies on institutional impact and longitudinal studies. The response to this call has been largely to follow impact into the classroom and investigate effects on student learning. Often this involves using multiple sources of data and control groups, and basing the work on published models of impact that offer guidance on what to look for. One such model, proposed by Kreber and Brook (2001) considers impact at multiple levels: a) participants' satisfaction, b) participants' beliefs and conceptions of teaching, c) participants teaching behaviour, d) student

perception of teacher behaviour, e) student learning and f) the culture within the institution. Meizlish et al. (2018) recently looked at impact using this model and existing data from within their institution. Although they explicitly omitted levels c) and f), these authors were able to convincingly report that participation in pedagogical training, the intervention they studied, led to positive changes in teacher behaviour as reported by students.

In a more elaborated study of impact, Condon et al. (2016) looked at whether participation in professional development led to participant learning as intended, whether this learning translated into teaching practice, and whether any such change led to improved student learning. Through the use of multiple sources in two different institutions, including artefact produced by students in courses, they conclude that evidence clearly answers the first two question: 'Tracing the first steps from professional development to changes in teaching leads to the conclusions that there is strong evidence of large impact' (Condon et al. 2016: 71). As for the third question, about whether student learning improve, the authors start by stating that '[u]ncovering evidence of faculty[1] learning that fosters and improves student learning is necessarily a longitudinal process' (Condon et al. 2016: 93). Importantly, the authors conclude the report with the suggestion that changes in student learning are not only affected by professional development activities.

An important factor that may impact student learning is the culture of a campus, which surrounds students and teachers and influences their behaviour. Furthermore, other changes, like changes in student numbers, funding, or leadership within departments and institutions, will also affect teacher behaviour and student learning. Condon et al. (2016: 112) go as far as asking 'what does success look like? It will look different depending on institutional context', so success or positive impact has to be assessed in relation to the institution's goals. This observation lifts the discussion of the impact of academic development activities like pedagogical courses for academic teachers out of the isolated box of academic development and into the messiness of institutional politics, leadership, and, perhaps most importantly, culture.

So, though interventions like pedagogical course might aspire to impact in the form of improved student learning, demonstrating this kind of impact is immensely difficult, especially as student learning is influenced by many more things than a teacher's participation in a pedagogical course. Condon et al. (2016) raise the provocative question of whether evidence of a link between positive effects of academic development in the form of improved teaching and improved student learning could be complemented by evidence of a corresponding link between poor teaching and poorer student learning. However, and perhaps not surprisingly, serious studies on bad teaching and its effect on student learning are rare.

Recent decades have seen a focus on methodological issues in the study of the impact of professional development activities for academic teachers, especially concerning the question of whether those participating improve their teaching and if this improvement can be described as an effect of the activity. In an excellent review of literature on this topic, Saroyan and Trigwell (2015: 99) conclude that the fact 'that there *is* a degree of impact from the professional learning programs that are being provided is no longer in doubt'. Pedagogical courses designed and conducted with a reasonable level of quality will influence teachers towards better teaching to a degree that is noticeable for students. This is consistent with Chalmers et al.'s (2011: 12) observation that a number of studies 'confirm that it is possible to evidence changes in teacher understanding, knowledge, skills and practices following participation in teaching preparation programs, and the consequential effect of these on student engagement and approaches to learning'.

But Saroyan and Trigwell (2015: 99) continue by stating that what 'is needed if that degree of impact is to be enhanced is research that tells us how the impact came about and, for example,

[1] *Faculty* is a North American term for the personnel that also could be labelled academic teachers or simply academics.

why some teachers gained a lot and others gained less'. In this, they follow Simon and Pleschová (2013), who state that further research in this area is needed that focuses on the meso and macro levels of higher education. That is, even though positive effects on teaching and student learning can be expected from pedagogical courses, there are still issues to consider before we know how teaching quality can be enhanced beyond individual teachers, before we know how academic development interventions affect entire institutions of higher education and even broader organisational structures.

In order to move in this direction, the next section discusses issues that in the literature has been described as important but also, in the same literature, have not been related to each other. If a deeper understanding of how academic development programs can influence institutions, we consider it important that these issues are described and that an attempt to synthesise them is made.

Issues to be pursued

In the above Saroyan and Trigwell (2015) concluded together with others that positive impact from professional development activities aimed at improving academic teachers' teaching ability is to be expected, even on student learning. But after having said this, Saroyan and Trigwell continue by stating that it is still unclear why some teachers develop and others do not, even after having followed the same pedagogical course. There are clearly mechanisms that are not fully understood.

Therefore, under this heading we list a number of issues that has been researched in academic development literature in relation to impact, but have not yet been sufficiently connected to each other.

Time

It takes time for effects on individual teachers to evolve as a result of professional development (Stes et al. 2007; Stewart 2014; Chalmers and Gardiner 2015). Hanbury et al. (2008: 475) cite one participant describing this. 'I was not engaged while doing the course, not until writing up and reflecting on the experience. You want to be doing other things, a three-hour wedge of time on the programme each week was really difficult to manage. But the benefits come later and are on-going; the value of the supportive environment is huge'. Participants might not just need time but also recurrent contact with educational support (Stewart 2014). Bickerstaff and Cormier (2015: 79) also discuss 'limitations of one-time workshops, decontextualized conversations about teaching strategies, and the challenge of facilitating in-depth conversations about teaching and learning'. Postareff et al. (2007: 568) even report that 'shorter training seems to make teachers more uncertain about themselves as teachers'.

To investigate effects from a single intervention over longer time is of course difficult (Condon et al. 2016), to do the same for academic development programs in relation to institutional change is arguably even harder. But such research is needed, as pointed out by Stes et al. (2010: 47): 'The long-term effects of instructional development remain a terrain for future study as well' (see also Chalmers and Gardiner 2015).

Saroyan and Trigwell (2015) especially emphasise the mechanism through which professional development influence teachers and student learning. The point they making is that some programs appear to influence some participants more than others. This indicates an underlying mechanism that has the power to explain this variation. 'To answer this question what is needed is (i) a hypothesis of the relations between context, mechanism of change, and outcome; (ii) an investigation of these relations; and (iii) a revised hypothesis based on the data obtained. Such an approach is rarely adopted in teaching development program evaluation, or indeed in most teaching/learning contexts' (Trigwell 2013: 263; Saroyan and Trigwell 2015). They, like others

(van Schalkwyk et al. 2015) identify the organisational meso level as interesting, especially the ways academic teachers interact with each other on topics related to student learning.

Thus, change through academic development takes time and the mechanism through which this change happens is not clearly identified or described.

Embedded in practice

Many accounts in the literature favour professional development activities that are placed close to the teaching practice itself. (Saroyan and Trigwell 2015; Lamers and Admiraal 2018). Reimann (2018) goes as far as to argue for professional development so close to everyday practices that the dichotomy formal and informal learning becomes meaningless. This line of thought has also been brought up by Roxå and Mårtensson (2015) who claim that most professional learning about academic teaching takes place outside formal training, instead it is an outcome of being socialised into and placed inside academic practices.

This raises questions of whether professional development activities are best performed by central units or as integrated parts of everyday practices. Trowler (2008) has argued that locally formed teaching and learning regimes stabilise teaching practices in higher education. These regimes, he underlines, secure quality in hard times of increased demands on teachers, but they also function as a conserving force in relation to professional development activities. Roxå and Mårtensson (2015) have taken this perspective further as they claim that local microcultures form different teaching and learning regimes as a function of levels of trust, shared responsibility, and whether or not the local culture embraces a developmental enterprise. Organisational culture stabilises local teaching practices.

The important thing appears to be the relationship between professional development and local practices, where practices entail not just skills and responsibilities but rather 'the totality of individual (and collective) experiences – the way in which we think, interact, enact and engage as academics in the work we do.' (McAlpine and Åkerlind 2010: 3). However, studying impact from professional development activities close to varying academic practices and varying teaching and learning regimes requires relevant methods and relevant objects of study. Chalmers et al. (2011: 20) support this perspective as they survey the literature: effects from 'were more significant when they involved participation in communities of practice involving mentoring, reflective practice, and action learning'. In relation to this, Chalmers et al. continue by stating that impact from professional development programs cannot be compared between programs unless the design of these programs are clearly described.

It is clear in the literature that academic development activities that takes place close to the teaching practice is more likely to have an impact, but it is unclear in the literature how practice is related to culture. Sometimes these are used synonymously, sometimes they are treated as separate.

Critical dialogue

Another recurrent theme in studies discussing the impact we are discussing here return to the importance of critical reflexion (Stes et al. 2010). Studies reveal that this is an explicit aim and consequently evaluative studies focus on whether this aim is achieved (Karm 2010). Often this reflective capacity extends into conversations, talking to colleagues in new ways (Hanbury et al. 2008).

Van Waes et al. (2015) studied how pedagogical courses can impact the way academic teachers interact about teaching and showed not only that participants in pedagogical courses build more relationships, but also how collegial relationships change in nature (Van Waes et al. 2016). This research leads in a direction where research on impact of professional development can be

studied as change in how colleagues interact with each other on matters concerning teaching and student learning. The authors also show that academic teachers known to be good teachers appear to interact differently with close colleagues than other groups of teachers. Teaching is talked about as something similar to an intellectual adventure of exploration and is less like a commodity that can be shared as packages of information.

This approach is similar to the one taken by Roxå and Mårtensson (2009) as they argue that academic teachers engaged in daily practice construct and maintain their conceptual understanding of teaching and student learning in private conversations with close and trusted colleagues. In these small but significant networks the pedagogical reality is understood and formulated during backstage, private interactions. Large-scale change in teaching therefore, will start and spread through these significant networks (Roxå and Mårtensson 2013). If pedagogical courses fail to influence conversations within the significant networks, changes will either not be sustainable or would be fragile and relate to only individual courses or teachers.

Such a perspective is supported by Centola (2018), who shows, both through simulations and empirical research that frequent interactions with trusted others, so called strong ties, are needed for behaviour to spread through a population. The reason is that to change a person's behaviour, many interactions are needed. Widespread change therefore has to travel through strong ties between individuals as a larger population changes its ways.

Both Van Waes et al. (2015) and Roxå and Mårtensson (2009) hereby touches on a social mechanism that potentially answer to the call made by Saroyan and Trigwell (2015). Further research on impact from professional development activities aimed at influencing teachers could arguably be studied through changes in patterns of interaction among organisational members, assuming that the impact is wider than just those who participate. If teaching and student learning were talked about more and in more advanced and scholarly ways as a result of academic development interventions, it would constitute impact.

Design of programs

Stes et al. (2010) ask for closer description of the design of programs being researched for impact. It is unlikely that all designs of professional development activities for academic teachers are equally effective. Naidoo et al. (2011: 2) conclude from a survey of the literature that development activities 'should be closely aligned with teachers' personal goals, interests and needs in relation to immediate curriculum, learning, teaching and assessment issues, and are best woven into the ongoing, daily work of the teacher'. This speaks against centrally organised courses for academic teachers that risk leaving them alone with the transfer of insights, concepts, and ideas into their personal professional context (Roxå 2005). What is needed are programs of some length that also limit the gap between the professional development activity and the actual professional context and that builds on participants' experienced needs. As indicated by Stes et al. (2010), more research is needed on this issue to become clear about what program design leads to the best impact. And to do this we need impact studies to include clear descriptions of the design of the program being researched.

Naidoo et al. (2011) compared several academic development programs in New Zealand. Despite the inherent problems with researching impact from programs, the authors conclude that impact on student pass rates could be identified: 'What the evidence does suggest is that academic developers working collaboratively with teachers may exercise some influence on pass rates' (Naidoo et al. 2011: 17-18). Again, it is stated that successful academic development programs are designed to encourage academic teachers' input. To reach positive, impact professional development is carried out in close relation with the academic teachers.

Felten and Chick (2018) argue that programs building on the Scholarship of Teaching and Learning—where teachers in interaction with each other are encouraged to, through inquiries into teaching and learning problems, share their results—will have a potential to change

existing practice. The argument is that as a direct result of academic development it is not only teaching and student learning that changes. Rather, academic development also results in a generative culture that 'multiplies the impact of formal faculty development, enhances self-motivated, individual faculty learning, and supports faculty experimentation in their courses' (Condon et al. (2016: 121). Felten and Chick (2018) conclude with describing one way to cultivate and sustain such a generative culture within departments and institutions.

What really carries potential in Felten's and Chick's (2018) ideas is the element that academic development is not only about influencing a specific group of individual teachers and their teaching, but about changing teaching traditions, or as formulated by Kezar (2007) it can lead to an evolving new element in the ethos or the heart of institutional culture. Speaking metaphorically, academic development seen from this perspective is about inserting a new element into the DNA of a teaching and learning culture, an element of taking teaching seriously. Such an element would, over long time influence the culture with the potential to impact higher education organisations.

Culture

The above reveals that to reach impact academic development has to be sensitive to context (Stes 2010). For example, Lindblom-Ylänne et al. (2006) showed that teachers teach differently while teaching the same subject in different departmental contexts. Ginns et al. (2010) illustrated with two cases how the same pedagogical course can lead to two very different outcomes because the professional contexts to which the participants return are either supportive of pedagogical conversations or negative. Context matters.

Frequently, it is put forward that the way through which context matters is cultural. In a discussion on professional learning of academic Van Schalkwyk et al. (2015) point towards the workgroup and its potential to enable or constrain individuals. The authors conclude 'this highlights the importance of culture at the meso and micro level, and of informal support for teaching and learning' (Van Schalkwyk et al. (2015: 8). In this, they align themselves with other scholars (Trowler and Cooper 2002; Trowler 2008; Roxå and Mårtensson 2009; 2015; Roxå et al. 2011; Clark 1998; 2009; Heinrich 2016; Williams et al. 2013). For example, Crawford (2010) interviewed 36 academic teachers at two universities in the UK in order to explore how these academics described what influenced them as teachers. The respondents talked foremost of their personal and collegial networks while in both institutions respondents had low awareness of institutional policies.

From the above, culture appears as a candidate for the prime object of study of impact from academic development, which should be pursued beyond individual teachers and courses. Is it possible to influence culture through various academic development interventions? And if so, is it possible to research this so that the link between academic development and improved teaching and learning culture can be described and potentially measured? These are potential questions to investigate.

Leadership and management

A good deal of the questions about whether impact is achieved are asked in relation to today's increased dependency on leadership and management (Stensaker et al. 2017; Bamber and Stefani 2016). Some go as far as claiming that academic development should play by the rules set up by the institution (e.g. Beach et al. 2016), or to go even further, as Spowart et al. (2017: 360) argue, 'that in order to arrive at an evidence-informed approach, evaluation and teaching-related continuous professional development must be clearly conceptualised, and aligned with institutional priorities'.

It is worth noting that these comments not necessarily are aligned with the perspective that

argues that academic teachers develop best when they work with problems laying close to their everyday practice. Directions formulated by managers do not always influence academic teachers much (Trowler and Bamber 2005; Crawford 2010).

Clearly this is an unresolved issue in the research field looking for impact from academic development programs. If institutional goals and objectives were aligned with cultural directions within institutions this would not be problematic. But if they are not, academic developers could be forced to take side. To reach impact by using teaching and learning cultures as a yardstick, or to use the yardsticks put forward by institutional managers. However, in the end this could be only a constructed conflict that suggests that, in order to reach institutional impact measured as improved student learning, academic developers have to include academic leaders and managers into their programs.

Summary

The above touches on issues that deserve more attention, especially if the institutional impact of academic development programs is to be considered. The facts that academic development activities are more successful if they are sensitive to contextual variation and collegial traditions, and that dialogues and activities take time should be considered. Pedagogical courses arguably should be extended in time; they should be organised close to practice and take collegial and reflective interaction into consideration. The scholarship of teaching and learning has been put forward as a guiding principle for design of programs. The aim is to induce new elements in organisational cultures, so that they generate new learning about teaching even outside direct interaction with academic developers.

However, it is easier said than done. We do not know if academic development programs recently set up in institutions without previous experience of such activities should aim for this immediately. Maybe it is a better alternative to assemble those teachers who have an interest even though these teachers may not share professional context or local culture. If so, to secure participation it could imply centrally organised activities. But it appears that it is more productive if the long-term aim is a gradually evolved program that matches the aspects described above.

An unresolved issue is the role of institutional leadership. It is likely that institutional managers have risen in ranks because of cultural norms of an older date. If academic development on an institutional scale should aim for cultural change, it is not unlikely that those activities at some point will be dissonant to conceptions expressed by leaders and managers. Or, that this type of impact will take enough time for a new type of managerial conceptions to emerge. Either way, academic development with an institution-wide ambitions have to interact with leaders and managers as well as individual teachers living their professional life inside the local cultures of the institution.

Perspective on teaching and learning cultures

Many of the references alluded to above have asked for a cultural approach in academic development. It may take different forms: teaching and learning regimes, critical reflection in collegial settings, an improved discourse, ways academic teachers interact, significant networks, or other terms relating to traditions, recurrent practices or tacit assumption. An impact of institutional scale by academic development could be formulated as a change towards a teaching and learning culture that consistently and long-term develop teaching in relation to student learning without having to interact directly with academic development. It would be natural for academic teachers to develop teaching in existing bases, and they would do so because the culture to which they belong finds it natural to do so.

In a model discussing impact from academic development, Kreber and Brook (2001) place

cultural change at the highest level of impact. The authors suggest that impact from academic development can be detected at six levels: a) participants' perception of and satisfaction with the program; b) participants' beliefs about teaching and learning; c) participants' teaching performance; d) students' perceptions of teaching staff's teaching performance; e) student learning; and f) the culture of the organisation.

Kreber and Brook's model corresponds well to what has been said in the literature about impact from academic development. Participants' satisfaction has always been a way to evaluate pedagogical courses and workshops. Participants' belief about teaching and learning, often in the form of conceptual change, is still one of the most frequently used measures in impact studies. Academic teachers' change in performance as a result of participating in professional development activities has also been included in impact research as well as student perception of teachers and subsequent changes in student learning strategies and outcomes of learning. However, the highest level, institutional culture has not often been targeted, possibly because it is difficult (Stes 2010). Culture is hard to pinpoint, it is hard to operationalize, and hard to investigate. It is possible that what we need is a perspective on cultural change that is more useful for the type of research discussed herein.

Arguably, the impact literature displays an ambivalent relationship to culture. Sometimes culture is related to institutional missions and managerial efforts like learning architecture. These are no doubt important aspects but it is not unclear how these things relate to teachers' everyday life. Another way to talk about culture is to use a scientific approach and invite anthropologists and ethnographers to study the culture in order to find suitable aspects useful when measures are taken to change the culture.

A discussion dealing with this ambivalence could potentially gain from a deeper understanding of culture as a phenomenon and thereby uncovering more fruitful perspectives. Alvesson and Sveningsson (2016) put forward a useful distinction clarifying what is being focused upon while discussing organisational culture. They distinguish between culture as how members of a culture describe themselves, how they live their daily lives, and what experts can say about them while studying them.

Table 1. Alvesson and Sveningsson's (2016) three types of culture based on the object of investigation

Types of culture	**Manifestation**
How members of culture describe themselves	What we say about ourselves while being interviewed, or what we say in policy-texts or vision-statements
How members of culture live their daily lives	The lived experience or the lifeworld What we relate to as we act and talk in the flow of daily events
How experts see members of culture	What comes to the fore when we are critically analysed by others

Alvesson and Svenningsson (2016) argue for the mid-level if we want to understand what really matters in a culture or if we aspire to change the output of the organisation. The top level is important when a culture presents itself and the bottom level is important when a culture want to discover things. But the latter two can only become integrated parts of the culture that influences behaviour and conversation if they are integrated into the flow of daily events. It is the lived experience that influence what is meaningful for members of a culture and this is why the mid-level should be in focus if we aspire impact on organisational culture through academic development.

This perspective see changes in vision statements or organisational changes from a managerial perspective as an outcome of academic development. If the organisation changes its promotion criteria to include reflections on teaching and learning or introduces a reward scheme for

excellent teachers, then these are viewed as signs of impact from academic development.

The bottom perspective of culture can be used while investigating culture with attempts to identify changes, that is, impact from academic development.

Operationalizing organisational culture

Teaching and learning culture is commonly conceptualised as habits and traditions, recurrent practices that are linked to tacit assumptions and established hierarchies. These features result in local teaching and learning regimes (Trowler and Cooper 2002; Trowler 2008). Jawitz (2009), who study a small number of early career academics as they move institution, describes how new hires have to adjust to the local processes of examination of their new environment. Walsh (2010) shows how doctoral students from overseas coming to England are influenced by the workgroup climate in which they are active. Merton et al. (2009) discuss how success in reform efforts in engineering education seem to be linked to how well these attempts at change are linked to the local culture. The phenomenon of local cultures in academia are also discussed in relation to Ostrom's (1990) notion of commons and Wenger's (1999) theory of communities of practice (Roxå and Mårtensson 2015). Ostrom devoted her life to studying social contexts where individuals collectively take responsibility for a shared limited resource. High quality microcultures in academia (strong in relation to both teaching and research) show resemblance with Ostrom's conceptualisation of commons, Roxå and Mårtensson (2015) argue. These and other contributions to the literature illustrate how culture exists and influences practices within higher education.

Through this perspective, culture is not something a group has, neither is it something the group can change, like one can change clothes. Culture is rather what the group is (Alvesson 2002; Alvesson and Sveningsson 2016). Culture is produced over time as the members interact and thereby both confirm old beliefs as well as introduce new. This is illustrated when members of a culture explain, 'this is how we do things here'. Often something said in order to distinguish the group to which one belongs from another group. This is what Jawitz (2009) shows when his subjects arrive to another institution to teach in the same discipline as they are trained in but now have to adjust to how things 'are done over here'. This is also arguably the explanation to why academic teachers teaching in two different departments adjust their way to teach according to what is expected (Lindblom-Ylänne et al. 2006).

Giddens (2004) discusses how this influence relates to personal agency, the idea that all individuals can chose to do things according to expectations or to do something else. Academics are trained in critical thinking, and thus, should perhaps be less responsive to this kind of influence. Giddens, however, argues that for cognitive reasons people mostly act according to what is expected of them. It is mostly too cognitively demanding to act otherwise, an argument also put forward by Kahneman (2011). One must also consider the number of actions a person performs during a day, most of which are less reflected upon. The likelihood that these would be according to cultural expectations is high.

In the light of the above it is likely that culture, especially local cultures within departments and workgroups does influence how members think about teaching and students, talk about these things, and chose to act while planning, performing, and evaluating teaching. It is important to maintain the term *influence,* since cultures do not push members in any mechanistic way. As mentioned above, members can act differently, and some do. Therefore, culture is not determining teaching and teachers, but there is a degree of influence.

It is likely that teaching and learning regimes as described by Trowler (2008) do exist and should be considered while impact from professional development activities aimed at improving teaching is discussed. For example, culture is likely to be important when different academics participating in the same pedagogical context display different developmental trajectories after having returned to their local working contexts, as discussed by Ginns et al.

(2010).

Culture constitutes group and distinguishes the group in relations to other groups. Changing culture therefore has profound effects on its members. Since the focus of interest in this paper is cultural change, it is natural to focus on times where local cultures are disrupted and its members thereby engage in negotiation. The outcome of this negotiation is either a change in how things are being done or a return to the previous state. Vollmer (2013) explores three aspects that are negotiated during times of cultural disruption (table 2): a normative, a cognitive, and a relational aspect. The first relates to how members behave towards each other and towards individuals outside their culture. The normative aspect also contains how sanctions should be deployed when members violate cultural expectations. This aspect is often talked about in moral terms. The cognitive aspect relates to what knowledge and information is considered to be relevant while describing things. It includes what competences and educational background are important. In this regard members are assigned different cultural capital. The third, relational aspect relates to hierarchies, status and reputations within the culture. Different members have different social capital and therefore they are offered different possibilities to influence what happens within the local culture.

Table 2. The aspects negotiated during times of cultural disruption and potential change

Aspects through which cultural change is negotiated	**Signs** referred to during negotiation	**Symbols** at stake in situations of disruption and negotiation	**Resources** used during negotiation
Normative	sanctions	norms, customs, morality, habits	rights
Cognitive	information	knowledge, competence, reputation	cultural capital
Relational	position	membership, status, reputation	social capital

Source: Vollmer 2013: 55.

If we consider Vollmer's contribution, changing cultures takes place when alterations occur in one or more of the three aspects, but it does not have to include all three aspects and the change can start in any of the three aspects. A culture can change as a result of new things being talked about. New aspects of student learning become important, maybe because they resolve previously unresolved issues. But the change can also start as a result of new members being assigned to the group or old members leaving the group. Or, it can change because members start to interact about teaching and learning in different ways. Researching cultural impact therefore should focus on changes in the three aspects described by Vollmer (2013). *If new things are being talked about in new ways relying on new competences and, as a consequence, new individuals do the talking, who thereby are assigned higher status within the culture, and these changes are aligned with the academic development programs intentions, then the culture is being impacted.* But the change could also be limited to one of the above aspects.

Even though identifying these aspects offers entry points to how culture can be influenced but the mechanism through which this change takes place remains unclear. To achieve this level of understanding we have to move even closer and show interest in the processes through which these changes takes place, that is finding a potent mechanism for studying cultural change as it happens. If this level of understanding were reached it would be possible to study impact as small variations in the mechanisms that governs cultural construction, maintenance, and, which interests us the most, change.

But before we move closer, we also have to consider that microcultures discussed herein also exist in wider contexts. One feature of organisational culture is that the concept itself is elusive. Cultural boundaries are likely to be leaky and permeable. Wenger (1999) describes communities of practice, an example of the kind of culture we are reflecting upon; he describes them as hierarchical in relation to a centre and a periphery. Central members have more influence over the community's direction and thereby are positioned favourably when it comes to evaluate actions taken by members. Peripheral members, on the other hand, existing in the margins of the community often benefit from being members of other adjacent communities. Thanks to this, microcultures are seldom closed; instead, they have permeable boundaries (even though the degree of permeability can vary considerably).

This is why it is important to consider the wider culture surrounding a microculture. In academic organisations each culture, for example, is engaged in various practices that interact within a microculture. If the background is a research culture it is likely that the relational aspects pointed out by Vollmer (2013) is constructed of several practices. If the background culture assigns more social capital for those with high status in research, it is likely but not automatic that this spills over into a teaching culture. The result is that members with a strong social capital (Ostrom and Ahn 2009) in research might maintain their status derived from research also during interactions relating to teaching. The wider culture so to speak assign value to members inside a culture. The members do not exclusively control neither the relational, cognitive nor the normative aspects. All organisational cultures are embedded in wider cultures, such as national cultures, or cultures visible in branches. Most prominent here is probably the academic culture as a whole, but also national and regional cultures.

One mechanism for cultural change

The question here concerns how microcultures in higher education organisations change. Granovetter (1973), discusses change in social settings based on the distinction between strong and week ties. Strong ties are interactions that are frequent, emotionally coloured with effects on, for example, identity. In a way, we construct our identity by interacting with a few others through strong ties. This mechanism creates clusters in large social setting where it is more likely that members interact with each other inside the clusters than with members of other ties. These clusters are similar to the microcultures considered in this review.

Granovetter (1973) continues by suggesting that in a large social setting constructed only through strong ties, the clusters would become increasingly isolated from each other with subsequent effects, like an increasing problem with coordination, with information flow, or with reaching effects from various development interventions.

However, between the clusters, constructed as a result of many interactions through strong ties, there are weak ties. These weak ties can potentially counter the problems Granovetter predicts for a partitioned social setting. He suggests an increased focus on the weak ties because these can potentially carry information between clusters and thereby, for example make organisational learning possible.

However, the problem with Granovetter's model is that it is built on simple contagion. Centola (2018) argues that it is unlikely that individuals will change their behaviour simply because they hear about something from someone they hardly know, that is, through weak ties. He argues that early networks research, research Granovetter draws on, to a large extent relies on studies of how virus spread from one carrier to another. In such a situation one explosion might be enough. This type of contagion Centola (2018) calls *simple contagion* and contrasts this to the more complicated spread of behaviour, *complex contagion.*

If individuals belonging to the same neighbourhood, cluster or microculture maintained through strong ties hear about an alternative way of doing things from someone they hardly know, it is likely, Centola points out, that they will turn to the others in the same cluster and collectively

evaluate what they have heard. Furthermore, it is likely that this evaluation will be negative if the new behaviour is distinctively different from how things are done previously. And, even more, such a negative evaluation will often function as an additional argument for the old ways. Centola shows empirically that trying to spread new behaviour through weak ties, i.e. simple contagion, is likely to be counterproductive to whoever wants to change things.

Instead, Centola argues, behaviour is more likely to change as a result of a having engaged in several interactions with people I trust who suggest new ways to do things. It is here the peripheral members of microcultures become important. Since they often are trusted both by central members in the microculture to which they belong and by peripheral members of other communities, they are a potential bridge through which complex contagion can take place. It will take time, though. Interactions happen over time and sometimes, effects from arguments favouring an alternative action may first be met by counterargument but later, during subsequent interactions, reappear as feasible alternatives (Brown 2000). To underline his argument Centola (2018) describes how both mathematical simulations and experiments conducted in social media communities evolve as predicted.

An organisational perspective

An organisational perspective can be derived from Caldwell (2006). In his review of the organisational development literature, he searches for ways to conceptualise levels of agency in organisations. Agency in this context is important since renegotiations of culture rely on agency to make things happen. Giddens (2004) talks about agency as any individual's capacity to conceptualize a situation and thereby make action possible. In the view on culture we have presented so far, members mostly act according to cultural expectations. If new ways, new information, or new members should become relevant inside a culture, members have to somehow use their agency and influence the other members. The process for this is outlined by Centola (2018) and presented above. People have to say new things, use new information, and talk to new people for the process to begin in one of these aspects. But to start, the process has to be initiated through agency.

According to Caldwell's (2006) review of organisational development literature, agency can be studied through a focus on four different organisational levels. The first is individual agency. Members of an organisation can choose to do things differently, or to say new things during interactions or meetings; academic teachers can choose to teach differently. The second level is the workgroup level, which exists in the organisational meso-level. In the literature reviewed above this is the level where teaching and learning regimes (Trowler 2008) and microcultures (Roxå and Mårtensson 2015) exist. These contexts do not change because one individual chose to do things differently. Instead, change happens as a result of a multitude of interactions through strong ties. The third level is the managerial level. Here various policies, for example relating to promotions criteria, pedagogical courses, quality enhancement routines, or almost anything else, can be formulated and implemented. The fourth level is a wider discursive level. Organisations exist in in a landscape of various wider discourses that influence the organisation through all of its three internal levels.

One way then to study impact of professional development practices like pedagogical courses on a higher education organisation is to look for changes in each of these levels. Academic development aspiring to impact an organisational culture should aim for describable changes in all the cells in the model above (table 3 on next page).

An academic development program is likely to start at some point in this space and as it grows to work its way outwards until it ultimately has impacted all cells. An ideal impact would be that at all levels interactions change (favouring improved teaching and student learning). In most cases an ideal impact would not occur.

Table 3. The aspects of levels through which organisational change should be affected and studied

		Aspects		
		Relational (Who is talking …	Cognitive …about what and…	Normative …in what way?)
Levels	Wider discourses			
	Management			
	Workgroup			
	Individual			

Source: combination of Vollmer's (2013: 55) and Caldwell's (2006) conceptualization

It will always be questionable whether the change described can be attributed to the academic development program. In fact, this observation leads towards a perspective where it is not the academic development program that impacts the organisation. Instead, since the academic development program is part of the organisation it is far more relevant to talk about the organisation that changes itself. Even as small intervention, like organizing a stand-alone teaching and learning event, constitutes an academic development intervention and is likely to have some, even though an almost invisible impact. Larger programs, including mandatory training of academic teachers, quality assurance programs and schemes for rewarding excellence in teaching, naturally have a greater potential to impact the organisation, but they are also in themselves signs of impact, since they would not exist unless something has changed already.

The relevance in higher education

Now, to what extent can the above be useful since most of the reviewed research have been conducted outside of academia and even more so outside academic development practices aimed at increasing quality in teaching.

The perspective on how behaviour spreads in a system of individuals offered by Centola (2018) finds support in the academic development literature. Roxå et al. (2011) discusses wide change in organisational culture through a network approach. Literature on teaching and learning regimes (Trowler 2008) and how these potentially can be linked to patterns of interaction has also been put forward (Roxå and Mårtensson 2009; Van Waes et al. 2015 and 2016; Poole et al. 2018). Roxå and Mårtensson (2013) suggest that effects from pedagogical courses 'travel' through the backstage of significant networks during interactions between trusted, and to each other significant, colleagues in a manner that resembles Centola's (2018) more empirical model.

Impact on the meso-level has been described as effects in communities of practice, workgroups or microcultures (Hanbury et al. 2008; Saroyan and Trigwell 2015; Van Schalkwyk et al. 2015; Roxå and Mårtensson 2015). These and other scholars argue for a close attention to the context where teaching is talked about among colleagues (Knight and Trowler 2000; Roxå 2005; Stes et al. 2010; Reimann 2018). Overall, the organisational meso level has gained much more attention during the later years in discussions on effects from academic development (Ginns et al. 2010; Mårtensson 2014).

The managerial level has gained attention in terms of organisational architecture for change (Chalmers et al. 2011). But also, in terms of leadership courses for local leaders (Mårtensson and Roxå 2015), and as criteria in systems for rewarding excellence in teaching (Olsson and Roxå 2013; Winka 2017).

The wider discourse will inevitably influence what is done inside higher education organisations and in academic development. The impact from these discourses is extremely difficult to describe. But there can be no doubt that they do exist and do influence not only

single organisations but also the national scale and beyond. In the UK, the newly introduced *Teaching Excellence Framework (TEF)* is one tangible example of intervention by wider discourses. However, it is likely that wider discourses mostly influence in much more subtle ways.

Lastly, Centola (2018) emphasises time just as it is a frequent feature in discussions of impact (Stes et al. 2010; Simon and Pleschová 2013; Stewart 2014; Chalmers and Gardiner 2015) Change takes time. Longitudinal studies are needed (Bickerstaff and Cormier 2015; Condon et al. 2016; Chalmers and Gardiner 2015) to shed further light on cultural change as one potential impact from academic development.

References

Alhija, F.N.A. (2017) 'Guest editor introduction to the special issue "Contemporary evaluation of teaching: challenges and promises"', *Studies in Educational Evaluation*, 54, pp. 1-3.

Alvesson, M. (2002) *Understanding organizational culture*, London: Sage.

Alvesson, M. and Svenningsson, S. (2016) *Changing organizational culture. Cultural change work in progress*, 2nd ed., London: Routledge.

Bamber, V. and Stefani, L. (2016) 'Taking up the challenge of evidencing value in educational development: from theory to practice', *International Journal for Academic Development* 21:3, pp. 242-254.

Beach, A., Sorcinelli, M.D., Austin, A. and Rivard, J. (2016) *Faculty development in the age of evidence: current practices, future imperatives*, Sterling VA: Stylus Publishing.

Bickerstaff, S. and Cormier, M. (2015) 'Examining faculty questions to facilitate instructional improvement in higher education', *Studies in Educational Evaluation* 46, pp. 74-80.

Brown, R. (2000) *Group processes. Dynamics within and between groups*, Oxford: Blackwell Publishing.

Caldwell, R. (2006) *Agency and change. Rethinking change agency in organizations*, Abingdon: Routledge.

Centola, D. (2018) *How behaviour spread. The science of complex contagions*, Princeton: Princeton University Press.

Chalmers, D. and Gardiner, D. (2015) 'An evaluation framework for identifying the effectiveness and impact of academic teacher development programmes', *Studies in Educational Evaluation* 46, pp. 81-91.

Chalmers, D., Stoney, S., Goody, A., Goerke, V. and Gardiner, D. (2011) *Measuring the effectiveness of academic professional development. Identification and implementation of indicators and measures of effectiveness of teaching preparation programs for academics in higher education.* Final Report, Teaching Standards Framework Project (Ref: SP10-1840), Australian Learning and Teaching.

Clark, B.R. (1998) 'The organizational saga in higher education', in J. Van Maanen (ed.) *Qualitative studies of organizations*, Thousand Oaks: Sage Publications, pp. 197-206.

Clark, B.R. (2009) *The Distinctive College,* New Brunswick: Transaction Publishers.

Condon, W., Iverson, E., Manduca, C., Rutz, C. and Willet, G. (2016) *Faculty development and student learning: assessing the connections*, Bloomington: Indiana University Press.

Crawford, K. (2010) 'Influences on academics' approaches to development: voices from below', *International Journal for Academic Development* 15:3, pp. 189-202.

Felten, P. and Chick, N. (2018) 'Is SoTL a signature pedagogy of educational development?', *To Improve the Academy – A Journal of Educational Development* 37:1, pp. 4-16.

Gibbs, G. (2013) 'Reflections on the changing nature of educational development', *International Journal for Academic Development* 18:1, pp. 1-14.

Gibbs, G. and 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* 5:1, pp. 87-100.

Giddens, A. (2004) *The constitution of society. Outline of the theory of structuration*, Cambridge: Polity Press.

Ginns, P., Kitay, J. and Prosser, M. (2010) 'Transfer of academic staff learning in a research-intensive university', *Teaching in Higher Education* 15:3, pp. 235-246.

Granovetter, M.S. (1973) 'The strength of weak ties', *American Journal of Sociology* 78:6, pp. 1360-1380.

Gunn, V. and Fisk, A. (2013) *Considering teaching excellence in higher education: 2007-2013. A Literature review since the CHERI Report 2007*. York, UK: Higher Education Academy.

Hanbury, A., Prosser, M. and Rickinson, M. (2008) 'The differential impact of UK accredited teaching development programmes on academics' approaches to teaching', *Studies in Higher Education* 33:4, pp. 469-483.

Heinrich, E. (2016) 'Teaching groups as midlevel sociocultural contexts for developing teaching and learning: a case study and comparison to microcultures', *Higher Education Research & Development* 36:4, pp. 702-715.

Ho, A.S.P. (2000) 'A conceptual change approach to staff development: a model for programme design', *International Journal of Academic Development* 5:1, pp. 30-41.

Ho, A.S.P., Watkins, D. and Kelly M. (2001) 'The conceptual change approach to improving teaching and learning: an evaluation of a Hong Kong staff development programme', *Higher Education* 42:2, pp. 143-169.

Jawitz, J. (2009) 'Learning in the academic workplace: the harmonization of the collective and the individual habitus', *Studies in Higher Education* 34:6, pp. 601-614.

Kahneman, D. (2011) *Thinking, fast and slow*, New York: Farrar, Straus and Giroux.

Karm, M. (2010) 'Reflection tasks in pedagogical training courses', *International Journal for Academic Development* 15:3, pp. 203-214.

Kezar, A. (2007) 'Creating and sustaining a campus ethos encouraging student engagement', *About Campus*, 11:6, pp. 13-18.

Knight, P. and Trowler, P. (2000) 'Department-level cultures and the improvement of learning and teaching', *Studies in Higher Education* 25:1, pp. 69-83.

Kolomitro, K. and Anstey, L. (2017) 'A survey on evaluation practices in teaching and learning centres', *International Journal for Academic Development* 22:3, pp. 186-98.

Kreber, C. and Brook P. (2001) 'Impact evaluation of educational development programmes', *International Journal for Academic Development* 6:2, pp. 96-108.

Lamers, A. and Admiraal, W.F. (2018) 'Moving out of their comfort zones: enhancing teaching practice in transnational education', *International Journal for Academic Development* 23:2, pp. 110-122.

Land, R. and Gordon, G. (2015) *Teaching excellence initiatives: modalities and operational factors*, York, UK: Higher Education Academy.

Lee, A., Manathunga, C. and Kandlbinder, P. (2010) 'Shaping a culture: oral histories of academic development in Australian universities', *Higher Education Research & Development* 29:3, pp. 307-318.

Lindblom-Ylänne, S., Trigwell, K., Nevgi, A. and Ashwin, P. (2006) 'How approaches to teaching are affected by discipline and teaching context', *Studies in Higher Education* 31:3, pp. 285-295.

McAlpine, L. and Åkerlind, G. (2010) *Becoming an academic: international perspectives*, Houndmill (UK): Palgrave.

Mårtenson, K. and Roxå, T. (2018) 'Development of academic developers – supporting a scholarly community', in A. Scholkmann, S. Brendel, T. Brinker, and R. Kortdts-Freudinger

(eds.) *Zwischen qualifizierung und Weiterbildung – Reflexionen zur gekonnten Beruflichkeit in der Hochschuldidaktik* [Between qualification and further education - Reflections on Skilled Occupation in University Didactics], Bielefeld (Germany): Deutsche Gesellschaft für Hochschuldidaktik.

Mårtensson, K. (2014) *Influencing teaching and learning microcultures. Academic development in a research-intensive university*, PhD thesis. Lund: Lund University Press.

Mårtensson, K. and Roxå, T. (2015) 'Leadership at a local level – enhancing educational development', Educational Management Administration & Leadership 44:2, pp. 247-262.

Meizlish, D.S., Wright, M.C., Howard, J. and Kaplan M.L. (2018) 'Measuring the impact of a new faculty program using institutional data', *International Journal for Academic Development* 23:2, pp. 72-85.

Merton, P., Froyd, J.E., Clark, M.C. and Richardson J. (2009) 'A case study of relationships between organizational culture and curricular change in engineering education', *Innovative Higher Education* 34:4, pp. 219-233.

Naidoo, K., Haigh, N., Holmes, A., Kuiper, A., O'Steen, B., Parker, L., Stefani, L., Steiner, S., Suddaby, G., Sutherland, K., Leach L. and Zepke, N. (2011) *Unlocking student learning. The impact of Teaching and Learning Enhancement Initiatives on first-year university students*. TLRI Project: Summary Report, available at http://www.tlri.org.nz/tlri-research/research-completed/post-school-sector/unlocking-student-learning-impact-teaching-and-0, accessed 17 December 2018.

Olsson, T. and Roxå, T. (2013) 'Assessing and rewarding excellent academic teachers for the benefit of an organization', *European Journal of Higher Education* 3:1, pp. 40-61.

Ostrom, E. (1990) *Governing the commons: the evolution of institutions for collective action*, Cambridge, UK: Cambridge University Press.

Ostrom, E. and Ahn, T.K. (2009) 'The meaning of social capital and its links to collective action', in G.T. Svendsen and G.L.H. Svendsen (eds.) *Handbook of social capital. The troika of sociology, political science and economics*, Cheltenham: Edward Elgar.

Peseta, T. (2014) 'Agency and stewardship in academic development: the problem of speaking truth to power', *International Journal for Academic Development* 19:1, pp. 65-69.

Poole, G., Iqbal, I. and Verwoord, R. (2018) 'Small significant networks as birds of a feather', *International Journal for Academic Development* 24:1, pp. 61-72.

Postareff, L., Lindblom-Ylänne, S., and Nevgi, A. (2007) 'The effect of pedagogical training on teaching in higher education', *Teaching and Teacher Education* 23:5, pp. 557-571.

Reimann, N. (2018) 'Learning about assessment: the impact of two courses for higher education staff', *International Journal for Academic Development* 23:2, pp. 86-97.

Roxå, T. (2005) 'Pedagogical courses as a way to support communities of practice focusing on teaching and learning', Paper presented at the Annual International Conference of the *Higher Education Research and Development Society of Australasia*, 3-6 July, Sydney, Australia.

Roxå, T. and Mårtensson, K. (2009) 'Significant conversations and significant networks – exploring the backstage of the teaching arena', *Studies in Higher Education* 34:5, pp. 547-559.

Roxå, T. and Mårtensson, K. (2013) 'How effects from teacher training of academic teachers propagate into the meso level and beyond', in E. Simon and G. Pleschová (eds.) Teacher development in higher education. Existing programs, program impact, and future trends. London: Routledge, pp. 213-233.

Roxå, T. and 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, pp. 193-205.

Roxå, T., Mårtensson, K. and Alveteg, M, (2011) 'Understanding and influencing teaching and learning cultures at university: a network approach', *Higher Education* 62:1, pp. 99-111.

Saroyan, A. and Trigwell, K. (2015) 'Higher education teachers' professional learning: process and outcome', *Studies in Educational Evaluation* 46, 92-101.

Simon, E. and Pleschová, G. (eds.). (2013) *Teacher development in higher education. Existing programs, program impact, and future trends*. London: Routledge.

Sorcinelli, M., Austin, A., Eddy, P. and Beach, A. (2006) *Creating the future of faculty development. Learning from the past, understanding the present*. Bolton MA: Anker Publishing Company.

Spowart, L., Winter, J., Turner, R., Muneer, R., McKenna, C. and Kneale, P. (2017) 'Evidencing the impact of teaching-related CPD: beyond the 'Happy Sheets'', *International Journal for Academic Development* 22:4, pp. 360-372.

Stensaker, B., van der Vaart, R., Dyrdal Solbrekke, T. and Wittek, L. (2017) 'The expansion of academic development: the challanges of organizational coordination and collaboration', in B. Stensaker, G. Bilow, L. Breslow, and R. van der Vaart (eds.) *Strengthening teaching and learning in research universities. Stratgies and initiatives for institutional change*, London: Palgrave Macmillan.

Stes, A., Clement, M. and Petegem, V. (2007) 'The effectiveness of a faculty training programme: Long-term and institutional impact', *International Journal for Academic Development* 12:2, pp. 99-109.

Stes, A., Min-Leliveld, M., Gijbels, D. and 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, pp. 25-49.

Stewart, M. (2014) 'Making sense of a teaching programme for university academics: exploring the longer-term effects', *Teaching and Teacher Education* 38, 89-98.

Sutherland, K. and Hall, M. (2018) 'The 'impact' of academic development', *International Journal for Academic Development* 23:2, pp. 69-71.

Trigwell, K. (2013) 'Evaluating the impact of university teaching development programmes. Methodologies that ask why there is an impact', in E. Simon and G. Pleschová (eds.) *Teacher development in higher education. Existing programs, program impact, and future trends*. London: Routledge, pp. 257-273.

Trowler, P. (2008) *Cultures and change in higher education. Theories and practice*, Gordonsville: Palgrave Macmillan.

Trowler, P. and Bamber, R. (2005) 'Compulsory higher education teacher training: joined-up policies, institutional architectures and enhancement cultures', *International Journal for Academic Development* 10:2, pp. 79-93.

Trowler, P. and Cooper, A. (2002) 'Teaching and learning regimes: implicit theories and recurrent practice in the enhancement of teaching and learning through educational development programmes', *Higher Education Research & Development* 21:3, pp. 221-240.

van Schalkwyk, S., Leibowitz, B., Herman, N. and Farmer, J. (2015) 'Reflections on professional learning: choices, context and culture', Studies in Educational Evaluation 46, pp. 4-10.

Van Waes, S., Moolenaar, N., Daly, A., Heldens, H., Vincent, D., Petegem, P. and Van den Bossche, P. (2016) 'The networked instructor: the quality of networks in different stages of professional development', *Teaching and Teacher Education* 59, pp. 295-308.

Van Waes, S., Van Bossche, P., Moolenaar, N., Stes, A., & Petegem, P. (2015) 'Uncovering changes in university teachers' professional networks during an instructional development program', *Studies in Educational Evaluation* 46, pp. 11-28.

Vollmer, H. (2013) *The sociology of disruption, disaster and social change. Punctuated cooperation*, Cambridge: Cambridge University Press.

Walsh, E. (2010) 'A model of research group microclimate: environmental and cultural factors affecting the experiences of overseas research students in the UK', *Studies in Higher Education* 35:5, pp. 545-560.

Wenger, E. (1999) *Communities of practice. Learning, meaning, and identity*, Cambridge: Cambridge University Press.

Williams, A., Verwoord, R., Beery, T., Dalton, H., McKinnon, J., Strickland, K., Pace J. and Poole, G. (2013) 'The power of social networks: a model for weaving the scholarship of teaching and learning into institutional culture', *Teaching & Learning Inquiry: The ISSOTL Journal* 1:2, pp. 49-62.

Winka, K. (2017) *Kartläggning av pedagogiska meriteringsmodeller vid Sveriges högskolor och universitet* [Mapping models for assessing models for evaluating pedagogical merits in Swedish higher education], Göteborg: Pedagogisk utveckling och interaktivt lärande 2017:02.

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Supplement 2: Historic narrative of educational development activities at the University of Tartu

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Output O4-a: A comparative study of two programs for teachers in higher education and their outcomes

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By Mari Karm (University of Tartu) and Triinu Soomere (University of Tartu)

Introduction

The starting point of educational development of academics at the University of Tartu is connected to such changes in the society, e.g. restoration of independence in 1991, reforms in the field of higher education (including signing the Bologna Declaration in 1999), and joining the European Union in 2004. Estonia became a part of global trends in society as well as in Higher Education. That all has created new challenges for academic staff and quality of teaching has become more important. Increasing numbers of students, globalization, new media, development of IT tools, and rapidly increasing amount of information demanded new ways of teaching. Therefore, the need for academics to enhance their teaching skills became obvious.

As a result of joining the European Union resources became available for developing academics' teaching skills and these resources enabled universities to develop systematic academic development activities and programs.

Developing pedagogical courses at the University of Tartu at the beginning

At 2005 the pedagogical course, Teaching and Learning in Higher Education (6 ECTS) was organized by the Center of Higher Education Pedagogy in the Faculty of Education. This was a small center with one lecturer and one administrative person established at the Faculty of Education to support the development university teachers' pedagogic skills. This center provided the pedagogical course for doctoral students (6 ECTS) taught by local lectures. The center also organized pedagogic a course for academic staff mainly taught by guest professors (Gunnar Handal and Kirsten Lycke from the University of Oslo, Norway) and was financed from Project LÜKKA (ESF).

The availability of EU funding enabled academic developers in Tartu to think about international co-operation strategically. We believed we could learn a lot from colleagues in countries that had a tradition of academic development, so we developed contacts with them. Initially the university pedagogy courses were conducted as short-term summer schools and were mostly taught by guest professors. At the same time, we considered it important to design our courses. The importance of designing own local courses for the development of academics' teaching skills was stressed also by international experts. Gunnar Handal emphasized that it would not be possible to rely on international experts for a long time; rather, local educational developer's competence needs to be built. Therefore, from the very beginning, local teachers from the University of Tartu were co-facilitators of the courses. The conceptual background of local pedagogical courses was designed in cooperation with colleagues such as Gunnar Handal (University of Oslo, Norway), Sari Lindblom-Ylänne (University of Helsinki, Finland) and James Groccia (Auburn University, US). They all played important roles in creating the conceptual and philosophical background of the basic pedagogical course.

As first pedagogical courses in Tartu were arranged in cooperation with international experts, these were taught in English. When local educational developers started to take more responsibility in teaching the pedagogical courses, course were also offered in Estonian.

Academic developers of the University of Tartu visited professional development centers in other universities in Norway, the UK, Ireland, Finland, and the US to find the best practices of academic development. We joined international organizations of academic developers (ICED, Nordic-Baltic Network) and participated in conferences on higher education teaching and learning. Our international contacts also helped us to better understand the role of academic developers enabling us to develop our own team of academic developers at the University of Tartu.

It was really important for the sustainability of academic development to have parallel courses for doctoral students and more experienced academics as well as courses about supervision for professors. This ensured that both novice and senior academics were involved in the educational

development process, they both experienced the process of learning teaching skills, and they were engaged in the transition from the content-centered to learning-centered approach.

From the very beginning, our pedagogical courses were not too intensive. There were certain requirements, certain assignments participants were required to complete to get the certificate, however, these assignments have been spaced out over the semester and participants have been required to complete 2-3 tasks for each in-class meeting. To finish the pedagogical course and get the certificate no overwhelming assessment tasks remained/accumulated.

Program PRIMUS (2008 – 2014)

The Program PRIMUS was launched by the Estonian Ministry of Education and was funded from the European Regional Development Fund and from the European Social Fund (ESF). It included all state universities in Estonia and also facilitated cooperation between universities in the field of educational development.

During PRIMUS a vast range of courses were provided: basic pedagogic courses, short pedagogic courses, presentation skills development workshops, communication skills etc. We created our own teaching skills development programs and provided basic pedagogical courses, as well as a variety of short courses, workshops (including communication skills, supervision, designing PowerPoint presentations, etc.) and summer and winter academies. The aim of the program was to engage as many academics as possible in educational development and through massive participation the attention to teaching was drawn. The variety of courses created conditions that academics got the opportunity to choose to participate in the most relevant or interesting course. The variety of courses was so wide that sometimes same academic staff members showed up at many different courses.

In 2008, funding from the EU allowed the establishment of two academic development centers: one at the University of Tartu and another at the University of Tallinn. The requirement was that the new center in Tartu must be a central university organ that provides service to the whole university, rather than being connected to a faculty or department. The reason for organizing central center was that the staff development center has to be neutral and all academic staff members should have equal access to professional support. The new center, The Center for Excellence in Teaching and Learning, was established in Tartu under the roof of the Lifelong Learning Center. This center organized courses and activities for the university of Tartu as well for other Estonian universities (as PRIMUS was for all state universities). Three 3 were employed in the center: an academic developer, who was responsible for teaching and two administrative persons. They all had been employees of the university and the academic developer in the center had her background in adult education.

For a year the two centers worked parallel to each other at Tartu University and then in 2009, the Center of University Pedagogy at the Department of Education was integrated to central pedagogical unit.

One important factor to ensure the consistency of academics' educational development is the training of new academic developers. In Tartu, local course leaders were trained through an apprenticeship model. Local university teachers were first participating in the international university pedagogy course, then they were teaching in cooperation with international colleagues and then started to teach independently as academic developers. During PRIMUS, there was also an initiative to organize a course for future educational developers, however, this did not work, because there were very few suitable applicants.

Our strategy to find new academic developers and course leaders was to cooperate with colleagues working at faculties (language, social science). These colleagues designed courses for academics and provided these courses, but they continued to work at their faculties in their own field. They taught some short courses for academics, for example interactive lecturing, group

work skills, course design, assessment. To enhance the educational development skills of these people and to support the development of an academic developers' community, we organized 2-day workshops for them. These 2-day workshops were really successful and this format of informal workshops worked well for developing new academic developers and creating a community of academic developers in Estonia. We still work with these people, i.e. with friends from the faculty, who we invite to teach some short course on special themes once a year or once in two years, in addition to academic developers employed by the center, who teach the basic pedagogic course.

One academic development activity was mentoring**,** which was launched during PRIMUS. An international expert in mentoring was invited to Estonia and some potential mentors attended the course offered thereby, however, mentoring as a system did not continue in Estonia. Yet, we should not underestimate the importance of the mentoring course and the idea of mentoring shared in Estonia, because educational developers who participated in the mentoring course use the skills gained there in their daily work. Some participants of the mentoring course have also provided informal mentoring to their colleagues.

Collaboration with foreign experts continued during the PRIMUS period. Many international colleagues were invited to teach in Estonia: either to conduct workshops or to teach at Summer/Winter Academies. Estonian academic developers participated in conferences on academic development (ICED) and visited centers of academic development at other universities (UK, Ireland, Finland, US).

A most important activity during PRIMUS was the publication of Estonian-language handbooks about university pedagogy. The deficiency of materials on university teaching in Estonian had been enormous: there were no materials we could refer to during pedagogical courses or suggest as additional readings. The newly published handbooks by Estonian authors focused on a theme or teaching skill (for example, there were handbooks on curriculum development, assessment, teaching methods, supervision). Biggs and Tang's (2007) Teaching for Quality Learning was translated into Estonian and published. Writing, translating and publishing about academic development in Estonian have forced us to work out the terminology of university pedagogy in Estonian.

The result of activities due to PRIMUS was that teaching at the university was made more visible and so was the development of teaching competencies. Program PRIMUS supported contacts between academic developers and the development of academic developers' community in Estonia. Cooperation with Tallinn's educational development center was inspiring and although collaboration between academic developers declined after the PRIMUS period for a while, it has recovered by 2019.

An important benefit of the program PRIMUS was that it supported international contacts, and thus, collaboration with international experts was possible. Being a member of the international academic developers' community had enormous benefits for Tartu through being part of international educational development trends, better understanding of these trends as well as changes in these trends.

Changes after PRIMUS (2015-present)

After the end of PRIMUS, the leaders of the University of Tartu decided to support academic development activities from the university budget mainly by continuing with amount that they contributed to academic development during the PRIMUS period. Thus, academic development survived in Tartu while a break in academic development activities occurred at some other Estonian universities.

The decrease of financial resources necessitated changes in academic development activities. However, the financial situation was not the only factor which inspired these changes. We

realized that such enormous number of courses that were provided during PRIMUS was not beneficial for meaningful academic development any more. Thus, we reduced the amount of activities and focused on to long-term professional development courses and activities, to learning from colleagues (through communities of learning) and to the scholarship of teaching and learning (SoTL).

Communities of practice

Communities of practice (learning communities) sprung out from discussions after the end of pedagogical courses. Communities of practice were organized to support implementation of gained knowledge and teaching methods. The format of communities of practice is the following: there are four meetings and also the peer observation of classroom teaching. These activities are led by the academic developer. This means that the community of practice (learning community) activity is not entirely informal. Participation in community of practice is voluntary.

The issues discussed during the community of practice meetings are raised by participants and usually emerge out of participants' teaching practice. The role of the academic developer is to keep the focus of discussions on teaching and to support change in thinking towards learning centered approach of teaching. In the process of peer observation of teaching the academic developer's role is to encourage academics to use teaching strategies which are new for them. Academic developers are also monitoring the feedback giving procedures to be sure that participants are giving constructive and inspiring feedback to colleagues.

Project ASTRA launched (2016-present)

Despite the fact that the history of academic development in Tartu is almost 15 years we still rely on the support of European funding. In 2016, Project ASTRA was launched and financed from the ESF. In 2016, the center has been reorganized and renamed as the Center for Personal Development and became part of Human Resource Office. Hence, academic development became a non-academic position and the main focus of the work is to provide courses and other kinds of developmental activities for academic staff of the university. Four positions of teaching consultants (i.e. academic developers) are funded by ASTRA, one for each field (humanities, social science, medicine, STEM) and one who is dealing with general issues. Another four persons focusing on e-learning work at the Center of Lifelong Learning to help academics to enhance courses in Moodle or to create courses in other kind of e-learning environments.

The scholarship of teaching and learning

The concept of scholarship of teaching and learning was added to academic development activities in Tartu in 2015. It was introduced in Tartu by our guest professor James Groccia from US as SoTL is common in US educational development. In addition, during our participation at conferences for academic developers (e.g. ICED) we also listened to presentations about SoTL conducted at other universities, which raised our interested in the issue. When the leader of our Centre for Excellence in Teaching and Learning Mart Noorma became vice rector in 2015, he supported our idea about SoTL grants and our efforts in applying for funding.

Each year, twelve faculty members (three from each field) can apply for a scholarship to develop and study their teaching. This is a two-year program with financial support to encourage the development of teaching. The scholarship money is divided into three equal parts. One part of the grant can be used as salary since the initial idea was that the university teacher who gets the grant will have reduced teaching duties. Another part of the grant is meant for participation in conferences on teaching (e.g. EUROSoTL). The third part of the grant is meant for organizing an event for colleagues from scholarship holder's institution. The latter has been useful in engaging

colleagues in discussions about teaching. Money for the academic unit has been used for organizing short seminars/training days specifically for the colleagues from the scholarship holder's academic unit. This proved to be most influential as it helped to reach people who would have not attended any pedagogical courses or would not engage in discussions about teaching otherwise. Thus, it allowed for spreading the 'germ' of pedagogical discussions and reaching circles of people untouched by previous development activities before. The grant holders have also used this third part to buy supplies to facilitate student engagement and learning (e.g. white boards for group work, clickers, etc.) for their institution.

Thus, the scholarship has been meaningful in terms of influencing the teaching culture at the University of Tartu. People who have received the scholarship have reported that the fact that they had received the grant is noticed, valued and appreciated by their colleagues. At the same time, it is not always clear for colleagues whether the scholarship is an award or a means to support academics' development of teaching. We consider the grant as a means to support the development of evidence-based teaching in our university.

People who have received the scholarship meet regularly to discuss teaching and its development. This scholarship community has become 'force multipliers' as its members had helped in organizing conferences, training days and workshops; they have been vocal in supporting the need for learner-centered approach to teaching in discussions about the trends for innovation and change at the university.

Annual conferences

The tradition of teaching conferences started as international conferences in 2011 focusing on the theme 'Is teaching an art or science?' and in 2013 with the theme of 'Higher education – higher level learning'. These international conferences were supported by PRIMUS. Leading academic developers from around the world were invited to Estonia to share their experiences and practices.

Table 1. Overview of participation at conferences organized at the University of Tartu from 2015 to 2019

Conference Themes	Year	University of Tartu	Humanities	Social Science	Medicine	Natural Science and Math	Other universities	All participants
Collegial Feedback*	2015	123	20	48	9	46	20	143
Good Practice in Teaching*	2016	191	42	68	24	57	14	205
Developing Your Teaching*	2017	163	36	54	26	47	46	209
Teaching for Learning – the University Perspective†	2018	129	33	47	25	24	176	305
Learning Dialogues*	2019	173	49	60	38	26	51	224

* Local conference; † international conference

Since 2015, the local conference entitled 'From teacher to teacher' are held regularly at the University of Tartu. The idea of local annual conferences was inspired by international conferences. The aim of local conferences has been to get more attention to teaching and development of teaching skills in Tartu. The first conferences were not SoTL conferences: the first one was a meeting of all learning community groups and the second local conference, organized in the World cafè format, focused discussing our mission statement, the Principles of Good

Teaching. Since 2015, one-day conferences were held in Estonian targeting the teaching staff of the University of Tartu with different themes: 'Collegial Feedback' in 2015, 'Good Practice in Teaching' in 2016, 'Developing Your Teaching in 2017, and 'Learning Dialogues' in 2019. Conference participants are not limited to the University of Tartu—academics from various Estonian universities participate in our conferences (Table 1). Instead of a local conference, in 2018 the international conference 'Teaching for Learning – the University Perspective' was organized.

The main format of presentations at local conferences is poster. Sessions of 5-6 posters in one room are organized, each poster is presented in 5-7 minutes and followed by a 3-4-minute discussion. Some new formats of presentations are designed for each conference. For example, during the conference on 'Learning dialogues' in 2019 a session called 'Professors' Roundtable' was organized to engage more professors into the discussions about teaching and learning. We consider it an important message that professors, with all the weight their positions carry, stand behind the idea that teaching and learning matter. To create a shift in the organizational culture, it is significant that professors openly state that teaching is not a secondary activity at the university and should not be avoided.

University of Tartu is a center and a platform for discussions about teaching for all Estonian universities and higher educational establishments. We see that we create value for the whole of Estonia, not only for the University of Tartu. The continuation of conferences is important as they send a constant signal that teaching and learning at universities matter. It is positive that the number of participants is growing over the years, which means that the idea about importance of teaching is gaining traction. The number of people from University of Tartu, who take initiative to organize workshops and present at international conferences, have grown as well.

Reference

Biggs, J.B. and Tang, C. (2007) *Teaching for quality learning at university*, 3rd ed., Maidenhead: McGraw Hill Education and Open University Press.

By Torgny Roxå (Lund University) and Jennifer Löfgreen (Lund University)

Supplement 3: Historic narrative of educational development at Lund University

Prepared as part of the collaborative project *Extending and reinforcing good practice in teacher development*, 2016-1-SK01-KA203-022551

Output O4-a: A comparative study of two programs for teachers in higher education and their outcomes

This version finalized on: 30 September 2019

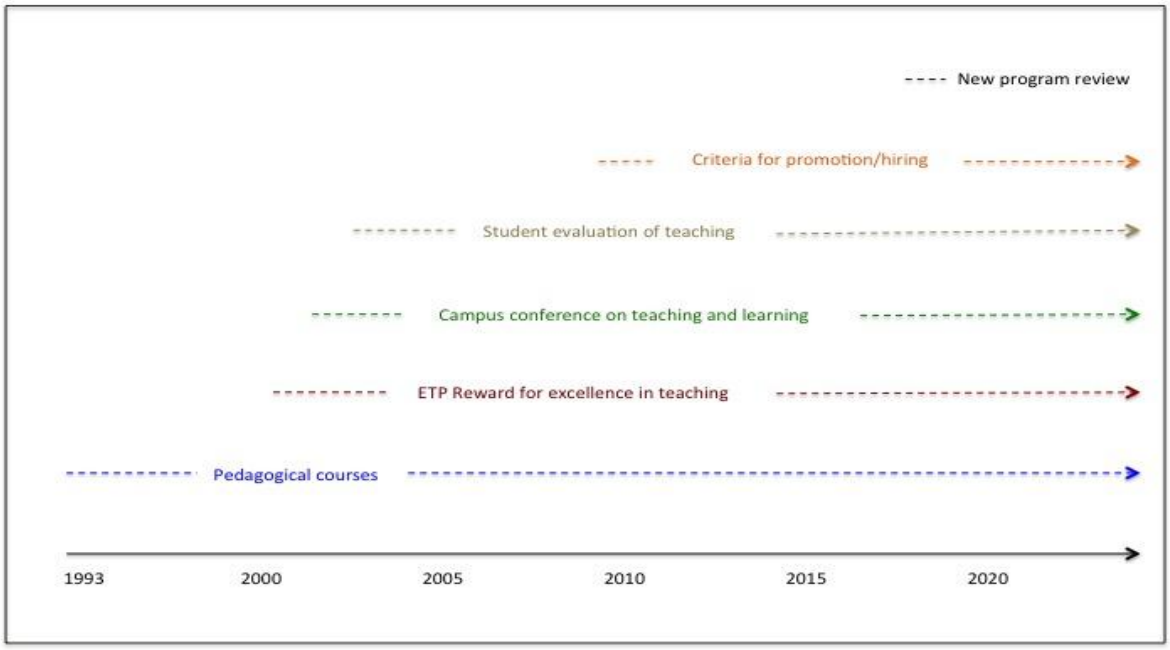
Co-funded by Erasmus+ program of the European Union

By Torgny Roxå (Lund University) and Jennifer Löfgreen (Lund University)

Introduction

This text describes a number of educational development interventions within the Lund University Faculty of Engineering (LTH): pedagogical courses, Excellent Teaching Practitioner (ETP) reward for excellence in teaching, a campus conference on teaching and learning, student evaluations of teaching, criteria for promotions/hiring, and a new way to do program review. The focus is on how these interventions were implemented and how they have evolved even though some indications on impact are also touched upon. How the educational development imitative expanded and evolved at from the early 1990s to today at LTH can be seen in figure 1 below.

Figure 1. The evolution and expansion of the educational development program at LTH of Lund University, 1993-present



However, it is important to note that the initiative in the 1990s was not the first wave of educational development reforms in Sweden in general and at Lund University specifically. The current educational development activities in the Faculty of Engineering at Lund University has not only developed gradually over time, but has seen continuous adaptation to the changing educational context and faculty needs. In the 1970s Lund University has already established its educational development centre, which operated with a small staff of three people but was mostly overlooked by faculty. It was, however, the knowhow of these educational developers that were utilized during the 1990s.

Pedagogical courses

During the early 1990s, LTH, together with all higher education institutions in Sweden received money dedicated for pedagogical courses for academic teachers. At LTH, this meant that despite a previous disinterest and even hostility towards educational research and pedagogy, one now had money that could only be used for pedagogical courses. This external pressure started the process described below but realizing the benefits of these initiatives early on, LTH leadership decided to take over the financing of educational development at the end of the 1990s when government funding has ended.

It started as a collaboration between two established teachers at LTH, where one collaborator at Lund Centre for Educational Development designed three courses: A course for PhD in how to present research, The Communication Course (120 hours), one similar course for those who are going to apply for Docent-ship (senior researcher), The Docent Course (80 hours) and one pedagogical course for senior teachers, The Inspirational Course for Experienced Teachers (120 hours), since the term pedagogy was banned. Later during the 1990s a course, Introduction to Teaching and Learning in Higher Education (40 hours) was added to the course selection.

The 1990s also meant some less successful attempts. Based on the book, Classroom Assessment Techniques (Angelo and Cross 1993), a course was launched for teachers to investigate their own teaching. In hindsight, it is easy to see that this was an early and less developed way of encouraging SoTL. Another attempt was to bring a group of teachers to the annual Improving Student Learning (ISL) symposium in the UK, and then support them during the following year to develop a SoTL project on their own and submit and present it during the next ISL-symposium. Only a few participants managed to reach the bar set, mostly because of weak framing due to the academic developers' underdeveloped understanding of what it takes to engage in SoTL. In fact, at the time, SoTL as a movement was unknown in Lund.

After 2000, the courses matured and became more informed by all kinds of relevant research. This development went in parallel with an increased academification of academic developers. Some of the courses was also extended in length, for example, Introduction to Teaching and Learning in Higher Education grew from 40 to 120 hours.

The Inspirational Course for Experienced Teachers became more group-based by design as it appeared to help participants reflect and negotiate the value of perspectives and concepts from educational research. Various attempts were made to link course with the teaching reality. For example, for a period heads of departments assigned participants directly to the course and sent with them a development task valuable for the department. Other experiments included having the participants to teach each other based on only instructions from the course leader. This, however, had to be abandoned as the pedagogical courses were made mandatory around the year 2005 because teachers with less motivation signed up for the course.

Other courses were added to the course offerings, a course each on how to write teaching portfolios, gender in engineering education, how to examine students and how to design and evaluate teaching from a disciplinary perspective, and how to improve lectures. Later a course called The Collegial Course (80 hours) was offered as a way for colleagues sharing a disciplinary field to collectively study a specific issue beneficial for an area of teaching that they themselves cared for.

Over the years, all courses developed more and more distinct features of SoTL. Today all courses include a project where participants develop or investigate something linked to their personal experience as academic teachers. The project is always reported in writing and in a scholarly way, including relevant references from other sources, and it is peer reviewed inside the course. All reports are then published in a database accessible from within LTH (Project and conference reports 2019). Currently (July 2019), the database contains about six hundred written accounts where teachers in engineering discuss various issues in education.

All courses have been evaluated by asking participants about their experiences, but also as part of national and international projects (e.g. Andersson et al. 2013). There have been studies showing that participants develop conceptually towards more learning centeredness. Courses are rated highly by participants, because of relevance for them. Studies have also shown that heads of departments report change in how teaching and learning is discussed and they describe this as an impact from the pedagogical courses. In the beginning the courses were inspirational and transformational, today they appear more as a confirmation of what is already going on within departments.

Reward for excellence in teaching

During the late 1990s, there was talk about how to reward good teachers and recognise their efforts. The dean's idea was a so-called pedagogical academy where these teachers were offered an interesting seminar and a nice meal every year, as a token of appreciation. However, this suggestion was heavily criticised and labelled as an insult to teaching and good teachers since research achievements were already rewarded by raise in salary and increased funding for departments. The dean's idea was never put in action.

A group led by an academic developer developed the Excellent Teaching Practitioner (ETP) award for individuals and it came with increased salary and increased funding for the department where the teacher was active. The system was launched in 2001 and refined in 2005 following an extensive research project evaluating the experiences of award holders from the early years. One result of this research project was that ETP was linked more clearly to existing promotion policies.

To receive the ETP denomination, any teacher at LTH can apply by submitting a teaching portfolio and a letter from their head of department. Three previously rewarded teachers from the faculty act as assessors. They base the assessment on the teaching portfolio and on an interview with the applicant. Once the assessors have reached a consensus, they submit a recommendation to the faculty board for promotion. In the board, student representatives offer their opinion, as a result of them listening in to relevant student bodies. In only very few cases have the recommendation from the assessors been questioned by the board for promotion.

ETP is extremely successful, as more than a hundred teachers in the faculty have earned ETP. The system has also inspired about 30 similar systems in institutions in the Nordic area. Its strength is the peer-review process and that it is possible to adopt the system to fit local needs in any institution. Furthermore, research shows that portfolios have evolved over time. Compared with portfolios written ten years earlier, current portfolios display a stronger focus on student learning, a more productive use of educational references, and focus more on the pedagogical problems discussed by the applicants (Larsson et al. 2015; Olsson & Roxå, 2013; Warfvinge et al. 2018). We can also see that ETP-teachers raise in the ranks in the faculty as the density of ETP-teachers increases on every level in the organisational hierarchy within LTH.

Campus conference on teaching and learning

As SoTL became a concept used regularly at Lund (this took place during the development of the ETP-system), it became natural to provide an arena for scholarly conversation about teaching and learning. This materialized for the first time in 2003 in the form of The Pedagogical Inspirational Conference, which became an annual event.

A call for papers is sent out asking for abstracts that have an educational focus and show potential to sparkle discussion among teachers at LTH. Experienced teachers review submitted abstracts. Usually 25-30 abstracts are accepted and their authors are invited to write an extended abstract of 1300 words for the proceedings, which is published on the day of the conference. All proceedings are published on the conference web site (LTHs Pedagogiska Inspirationskonferens 2019).

Studies have shown that papers in the proceedings evolve over the years in terms of more focus on student learning and less on teaching, more systematic investigations and a more constructive use of educational references. The assembled proceedings present themselves as a good example of a scholarly conversation on teaching and learning within a faculty of engineering, and they are openly accessible.

Student evaluation of teaching (SET)

In 2003, LTH launched a comprehensive system for how to collect students' experiences on courses. A few years earlier the Swedish government had made SET mandatory as a part of securing the student voice in quality work. SETs should be distributed in all courses and the results should be made available for students. LTH opted for the Course Experience Questionnaire (CEQ), developed by Paul Ramsden and designed to ask students questions making it possible to determine if the courses support a deep approach to learning (linked to understanding and personal meaning) or a surface approach to learning (linked to instrumental studying towards the exam). Higher numbers in the results from CEQ indicate a course influencing students towards a deep approach to learning.[1]

During the process of implementation, it was decided that CEQ numbers should not be used instrumentally to determine quality. Instead, it was the critical reflection or even better critical discussion on and over numbers produced by the CEQ that should be linked to quality claims. Therefore, the CEQ was predominantly seen as a way of supporting a scholarly conversation about teaching and learning, a conversation engaging most of all academic teachers and students.

The system is set up as follows. Students indicate their experiences through twenty-five Likert-scale and two open-ended questions. Once collected and supplemented with contextual data, the system constructs a *working report* that is sent to the course teacher, two volunteer student representatives, and the program coordinator. These three parties then meet to discuss the course using the working report as well as personal experiences and data collected during the course through other measures. Following the meeting, the three parties independently summarize their reflections. These reflections, together with the SET data (excluding open-ended comments) are made public within the Faculty's intranet as an *end report* and e-mailed to all students registered in the course.

It has been hard to assess whether CEQ has had an impact within the faculty even though it provides material for informed pedagogical conversations within the faculty. Frequent comments from teachers indicate that response rate is too low (30-35 per cent), that bias is frequent, and that students lack the disciplinary knowledge required to assess courses. On the other hand, anecdotally, those involved in the assessment of portfolios for the ETP-system report an increased use of CEQ-numbers, and that they are used for critical reflection rather than simply reported.

Currently the CEQ-database contains 250 000 questionnaires assembled since 2003. An analysis of the 6 items linked to good teaching (teaching behaviour) reveal a linear development from 2003 to 2017. LTH is clearly improving its teaching, at least as reported by students.

Criteria for promotion

Policies have stated that pedagogical merits should be judged evenly with research merits for many years. But for many years this had not been common practice. Around 2005, Lund University's senior management started to demand pedagogical reflection from those being put forward for promotion to professor. At the same time a vice-dean for undergraduate education at LTH began to implement similar procedures: anyone who seek promotion should be able to reflect critically on his or her own teaching practise.

This vice-dean had participated in the early pedagogical courses, she was awarded ETP, and she had acted as an assessor at several occasions before starting this reform effort. At the time, as a vice-dean, she acted as chairperson in the board for promotion, and this is where she started the discussion. If it is stated in the policies that pedagogical merits should count, and if through the ETP system we have experiences and knowledge enough to know how this can be done, why should we not do it?

[1] For details, see Supplement 9 of the O4-a project outcomes.

The process that was initiated has been iterated many times. In 2018, the local promotion policies state that to be promoted to professor at LTH, the applicant must have been through 400 hours of pedagogical courses, or have ETP. Today there are very few occasions where this promotion policy is questioned.

New program review

Due to shifts in the national quality regime, the Swedish government has assigned all higher education institutions to design and implement their own quality system. Since LTH teaches almost exclusively programs it was natural to let its new way to do program review become a central part of this quality system.

There are national objectives for all diplomas in Sweden. It is stated what learning programs training engineers, architects, or industrial designers should reach. The program review procedure that was implemented 2017 builds on the ETP system. The program boards are asked to show both how they organise their programs so that learning outcomes are reached and they are also asked to provide evidence for how they know the outcome are reached. The descriptions and arguments are presented in a program portfolio that is then assessed by a group of experienced teachers within LTH, who then provide feedback to the program boards.

Experiences show that it is extremely hard for program boards to provide evidence for why students reach the learning outcomes. Historically, program boards have mostly functioned as administrative hubs have become apparent. Now they have to start communicating with teachers to understand how students are assessed and what the outcome of this assessment has been.

Discussion

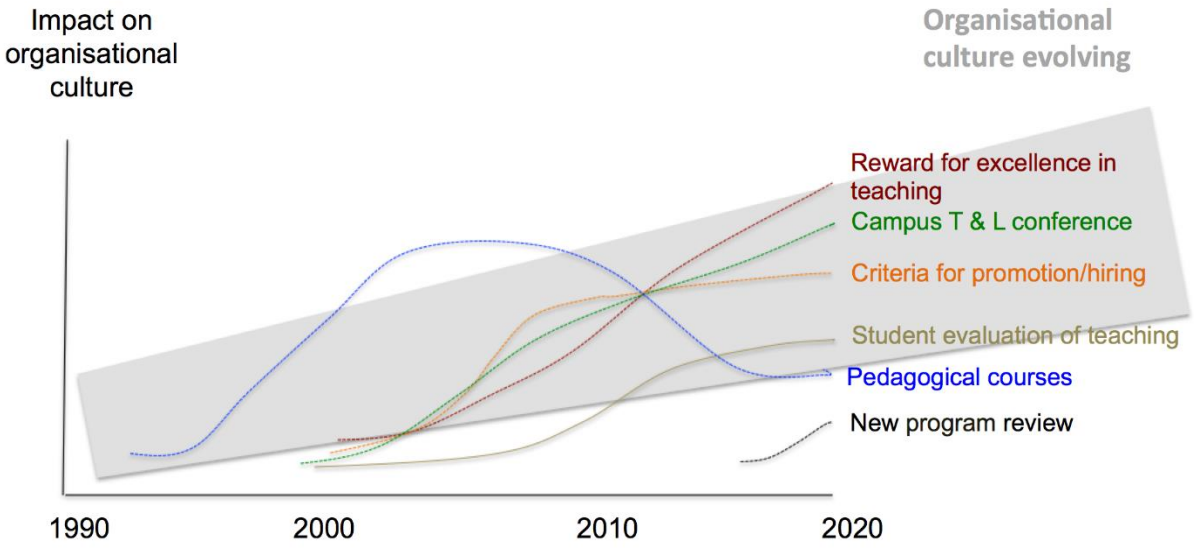
It takes time to change a higher education organisation like LTH. It takes a long time. Why this is so, is a fair question. One answer could be that academics are trained to think for themselves and what they do should be reflected upon and preferably integrated into a coherent body of knowledge. Academics at a university do not simply perform a practice that could be changed through a change in protocol. If the practice changes it can only happen because those being involved change their perception of, their thinking about, and the skills they use in this practice. They have to change.

Is that really necessary? Could they just not do things differently? No, they cannot. The problem historically was that academic teachers at LTH just taught, without thinking much about it. Now we want them to think and talk about teaching and student learning. They have to learn how to do it, and furthermore, they must find it meaningful. This is how academic teachers should operate, and it takes time to evolve these elements in individual academics and in academic cultures.

Through the narrative, one can argue runs a systematic perspective. Educational development interventions can be implemented and can also become recurrent features in an organisation. But the process of change takes off when these interventions start to interact with each other and become an increasingly dense fabric visible and present in everyday lives and actions of the organisational members. Thus, one educational development intervention will not be enough. Several interventions that support each other are necessary.

In this text six such interventions have been described. In the world of educational development there are many more, but these six have been important at LTH. They have also evolved over time, and they have impacted the organisation differently at different points in time. In figure 2 this variation is described graphically. The material feeding in to the graph has been provided as memory pieces by several individuals who have been in the organisation over the entire time period.

Figure 2. Measures impacting the teaching and learning culture at LTH



Thus, it can be argued that at LTH the various interventions have had various degrees of impact at various stages in the described process. The courses were tremendously important in the beginning of the process. Participants described them as eye opening, as if a new way of perceiving student learning was laid out before them. The courses also provided a language for those who already were engaged in teaching, they could understand things in different ways, and they could start talking to others who also were engaged in teaching.

This language is now common knowledge in the organisation and therefore the value of the courses has changed. Nowadays participants report that courses mostly confirm perspectives they have already met in the departments, and that you are just expected to participate in the courses. It has been said that previously there was an impact from participating in the courses. Today it is more of an impact from not participating, since you then deviate from what is normal.

For this reason, it is fair to say that the impact from pedagogical courses has dropped and other interventions have taken over as main features in the process. No doubt, the ETP-system has impacted the organisation the most. Not only does it provide incentives for teachers, it also assigns individuals an authority, and these individuals to a large extent become important agents within the organisation. Yet another legacy from the ETP-system is the experience that, it is possible to assess pedagogical merits, and there can be a procedure and criteria for it. Experiences from ETP have been crucially important for the change in promotion criteria and for the new way of doing program review.

Throughout this process the fact that academic teachers perceive new things in teaching and the fact that they talk to each other about them have been both an outcome but even more a driver for change. The increasingly intense and informed conversation about teaching and student learning has pushed for innovations in teaching and for ongoing improvement over the years.

A most visible evidence of the expansion of educational development activities at Lund is that now the university has four different educational development centres: the university-wide Lund Centre for Educational Development, the Centre for Engineering Education at LTH and one center each at the Faculty of Medicine and the Faculty of Science. There are now about fifteen to twenty educational developers working at the university.

Therefore, the campus conference on teaching and learning and the system for student evaluation of courses have both provided material for and arenas for these conversations. And, it has to be emphasised, it is the everyday conversations, almost invisible for external reviews and for conventional evaluation measures, that both constitute and drive the change.

References

Andersson, R., Ahlberg, A., Diehl, A. and Price, L. (2013) 'Investigating the effects of academic development on novice teachers' conceptions of teaching in HE', Paper presented at the *41st SEFI Conference*, 16-20 September, Leuven, Belgium.

Angelo, T.A. and Cross, K.P. (1993) *Classroom assessment techniques: a handbook for college teachers*, San Francisco: Jossey-Bass.

Larsson, M., Anderberg, E., and Olsson, T. (2015) 'Researching the transformation in the scholarship of teaching and learning through teaching portfolios and conference papers: a reflection at the institutional level', in S. Booth and L. Woollacott (eds.) *The scholarship of teaching and learning in higher education: on its constitution and transformative potential*, Stellenbosch: Sun Press.

LTHs Pedagogiska Inspirationskonferens [LTH's Pedagogical Inspirational Conference] (2019) *LTH, Lund University*, available at http://www.lth.se/genombrottet/lths-pedagogiska-inspirationskonferens/, accessed 31 July 2019.

Olsson, T. and Roxå, T. (2013) 'Assessing and rewarding excellent academic teachers for the benefit of an organization', *European Journal of Higher Education* 3:1, pp. 40-61.

Project and conference reports (2019) *Genombrottet, LTH, Lund University*, available at https://journals.lub.lu.se/index.php/KG/index, accessed 31 July 2019.

Warfvinge, P., Roxå, T., and Löfgreen, J. (2018) 'What influences teachers to develop their pedagogical practice?', Paper presented at the *LTHs 10:e Pedagogiska Inspirationskonferens*, 6 December, Lund, Sweden.

By Agnes Simon (Masaryk University) and Gabriela Pleschová (University of Economics in Bratislava)

Supplement 6: Description of the joint educational development course for PhD students at Masaryk University and the University of Economics in Bratislava

Prepared as part of the collaborative project *Extending and reinforcing good practice in teacher development*, 2016-1-SK01-KA203-022551

Output O4-a: A comparative study of two programs for teachers in higher education and their outcomes

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By Agnes Simon (Masaryk University) and Gabriela Pleschová (University of Economics in Bratislava)

Inception and course development

The course, Extending and Reinforcing Good Practice in Teacher Development grew out of the recognitions (1) that Central European PhD students lack any pedagogical education about university-level teaching but are often required to teach as part of their PhD studies, and that (2) teaching-centered education still dominates the higher education of this region. The course, therefore, was designed to assist Central and Eastern European doctoral students in enhancing their teaching capacity. A philosophy of change underlies the course that aims at, in the short run, shifting participants' conception of teaching, and in the long run, effecting changes in their practice and in the institutions where the courses is based. The course is built on three principles corresponding to the course objectives: (1) participants' embracing the principles of student-centered education, (2) improving their ability to critically reflect on teaching and student learning, and (3) acquiring essential theories related to higher education learning and teaching.

Despite the lack of systematic pedagogical education for doctoral students in university-level teaching and learning in Central Europe, we could rely not only on earlier experiences of the course developers, and particularly the project leader, but also expert advice from Western educationalists when designing the course. As for the former, two short-lived courses—Teaching and Learning Politics and International Relations for PhD students at Masaryk University (MUNI) and the Center for Development of PhD. Students. Scholarly-based Education for early career scholar from all over Slovakia including the University of Economics in Bratislava (EUBA)—reinforced the need for teaching and learning education and offered lessons on what can and cannot be successfully done in the region. Meanwhile the Teaching and Learning Summer School of the European Consortium for Political Research provided insight into the benefits and limitations of summer school-type workshops.

The course design has also benefited from expert advice, which were based on the educational development experts' decades-long experience in building similar courses in Western European institutions. They suggested (1) basing the course at specific universities rather than designing a national- or region-level course and (2) deeper involvement with existing university structures. In addition, earlier research showed that without a strong theoretical background, participants are unlikely to change their teaching practice and that summer schools or short workshops focused only on theory does not always effect change in the teaching practices of individuals and brings no change in institutional cultural at all (Postareff et al. 2007 cf. Ho et al. 2001).

In addition, the actual course structure was also determined by the grant agency that funds the course. For example, the course had to be placed in at least two institutions. The two institutions were chosen due to the project manager's familiarity with teaching and learning practices of both at the University of Economics in Bratislava, Slovakia, and Masaryk University in Brno, the Czech Republic. EUBA belongs to the largest universities in Slovakia attended by about 7,500 students, who study mostly economic disciplines. MUNI is the second largest university in the Czech Republic, whose more than 40,000 students enroll in a wide range of study programs. Both universities emphasize research over teaching and, as typical in the region, they prioritize teacher-centered to frontal lecturing.

Finally, to make sure that our understanding of the situation in the participating institutions agrees with the needs of their doctoral students, we surveyed the targeted doctoral students at both EUBA and MUNI. About ninety students filled out our questionnaire. While the survey confirmed our general assessment of the situation in the institutions, it also uncovered some variations in practices and needs across departments, faculties, and universities.

The course has been originally intended for second-year doctoral students in the social sciences. In practice, doctoral students in later stages of their PhD studies were also admitted and in the 2nd year of the course target group were extended to other disciplines. The maximum number of

participants in each year were limited to twenty and participants were expected also to have teaching assignment at their universities preferably in the fall semester so that they can complete the course on schedule. Course participants have been required to have adequate knowledge of the English language as the course ran in English. English was chosen as the language of instruction due to lack of availability of both (1) sufficient number of educational developers to serve as session leaders and coaches and (2) scholarship of teaching and learning (SoTL) literature in either the local Czech and Slovakian languages. Participants were selected through an open application process at MUNI and EUBA during which applicants were asked to submit their curriculum vitae, an essay on their teaching experience, and a motivation letter. Those who met the above criteria of eligibility and demonstrated the strongest interest in and commitment to participating in the course were admitted.

The course is voluntary, which helps in attracting committed and interested participants mostly, but makes it harder on them to finish the course as they complete this course on top of the commitments that stem from their PhD studies. To counterbalance this, we have found it important that, with the participants' agreement, we sent letters to their supervisor or department head in order to inform them about the doctoral student's participation in this voluntary course, ask for their understanding that it may put extra pressure on the participant, and offer the chance for the contacted person to ask questions.

Course design

Course activities

The course consists of two major parts: an 8-day face-to-face summer school and a 1-year online coaching segment (table 1 below). Regarding the summer school, it is designed to give participants a theoretical knowledge in teaching and learning on which they can build during the online phase of the course. Accordingly, participants become familiar with such basic concepts as reflective teaching, Bloom's taxonomy, constructive alignment, deep and surface learning, or formative and summative assessment. The preparations for summer school before participants arrive to the summer school's location: they have to gather information about teaching and learning practices in their department and read a set of teaching-related articles.

The summer school has twenty-one sessions, each using student-centered methods. While giving a theoretical foundation to participants is a key part of the summer school, it also has a strong practical focus. Accordingly, participants complete three daily activities, each of which is connected to a major aspect of teaching—class and course design, in-class learning activities, and assessment—that were covered during the daily sessions. In the evening, participants submit the daily activities in writing and next morning they receive feedback from their peers using rubrics and discussions. Toward the end of the summer school participants are invited to put the acquired knowledge into practice by preparing and delivering a short (15-minute) teaching demonstration in small—six-to-seven-member—groups, where they receive guided feedback from their peers and their session leaders. This microteaching experience has been designed to bridge the conceptual focus of the summer school with practical implementation, which will be the focus of the online segment of the course. In addition, based on the feedback they received from peers and session leaders, participants are asked to reflect on their microteaching experience and how they could become more effective practitioners in a brief (800-word) paper. Reflections are further encouraged by the requirement of submitting revised versions of the daily activities (based on peer feedback) and the revised version of the microteaching reflection paper (based on coach feedback).

The second part of the course is an academic-year-long online coaching sequence that provides support to participants in the daily challenges of their teaching. During this, participants work with a coach, who guides them toward a deepened internalization of good pedagogic practices.

The goals of the online course element are twofold: (1) participants should introduce the conceptual knowledge they gained in the summer school into their teaching; and, (2) engaging in a SoTL inquiry. Accordingly, they are required to design a systematic inquiry—an innovation reflection paper—to measure the impact of the change they applied in their teaching. The reflection paper is completed through a series of writing assignments that require participants to develop their teaching innovation and the related research as well as the writing of the paper in increments. In order to help participants to avoid the pitfalls of developing a teaching intervention and design a research around it, and to strengthen participants' sense of reflectiveness, all writing assignments require the submission of a first draft and a final version. Participants receive written feedback (and if their coach finds it necessary oral feedback via Skype consultation) to both the first drafts and final versions in form of formative assessment. Whereas participants are expected to incorporate revisions to the final version that address suggestions and concerns raised by their coaches regarding the first draft, feedback on the final version is most often instructive regarding the next assignment.

Table 1. Structure of the Erasmus+ Extending and Reinforcing Good Practice in Teacher Development course

<table>
<tr><th>Characteristics</th><th>Assignments, Activities</th><th>Recommended Activities</th></tr>
<tr><td colspan="3">Part 1. SUMMER SCHOOL</td></tr>
<tr><td>8-day long
Participants attend 21 theoretical and practical sessions</td><td>1) Three daily activities on
● Course design/class plan
● In-class learning activity
● Assessment
2) Microteaching presentation
3) Microteaching reflection paper</td><td></td></tr>
<tr><td colspan="3">Part 2. ONLINE COACHING</td></tr>
<tr><td rowspan="4">Academic-year long
Participants work with a coach</td><td colspan="2">Fall semester</td></tr>
<tr><td>1) Teaching innovation in three phases:
● Proposal
● Research Design, Data Collection Instruments, and Session plans
● Implementing teaching innovation</td><td>Classroom observation
Coffee and cake meeting</td></tr>
<tr><td colspan="2">Spring Semester</td></tr>
<tr><td>2) Innovation reflection paper
3) Statement of Teaching Philosophy</td><td>Professional opportunities (e.g. conference, workshops) as they arise
Publishing in book edited from participants' reflection paper
Graduation ceremony
5-day workshop for educational developers</td></tr>
</table>

Most of the online coaching segment of the course, as mentioned above, revolves around participants working on a teaching innovation, i.e. the introduction of learning and teaching methods, approaches, or activities into participants' teaching practice that they have not used before and/or that are not commonly used in their institution. The fall semester is spent with identifying a teaching challenge and designing the innovation using the theoretical knowledge

that they gained in the summer school to address that challenge. It is done in several steps. First, participants are asked to write a proposal. Second, they are to write detailed session plans for the innovated sessions (a minimum of three sessions) and design a research around the innovation in order to measure its effectiveness. Finally, they implement the designed innovation and collect data for the evaluation of the teaching innovation. In the spring semester they draft and revise the teaching innovation reflection paper based on their observations and actual qualitative and/or quantitative data. The concluding writing assignment of the online segment asks course participants to think explicitly about their teaching approach in form of a statement of teaching philosophy.

For the successful completion of the course, participants (1) need to submit all assignments in a timely manner and (2) all submitted material should be evaluated by their coach[1] as showing at least a low-level manifestation of the three course goals: student-centeredness, reflective and critical attitude to teaching, and the use of pedagogical concepts. Coaches work with rubrics to guarantee a common standard across the evaluations but they are also free to add any comments to the feedback sheet and the submitted assignments as well.[2] Course graduates receive recognition from the two institutions that have accredited the course: EUBA offers 10 ECTS credits and the Staff and Educational Development Association (SEDA) of the United Kingdom awards an internationally recognized certificate to all course graduates.

Voluntary activities and other opportunities

The course also contains non-compulsory elements that are designed to help participants build a community of practice among themselves and thus establish a group with whom they not only share a common experience but also can freely exchange ideas about teaching and learning. First, participants are encouraged to observe each other's classes during the implementation of their teaching innovation and to have a candid discussion about it. Second, we organize a coffee and cake session at each participating university and invite all participants from that institution to attend. During this we encourage participants to share with each other their teaching experience. The graduation ceremony where they receive their certificate for the completion of the course is the last such opportunity to bring course participants together.

Finally, we offer participants various additional opportunities related to teaching and learning. First, authors of the best teaching innovation reflection papers have been invited to publish their teaching innovation papers as chapters in a book published in cooperation with SEDA (Pleschová and Simon 2018). Second, we notify them about professional opportunities within the scholarship of teaching and learning and encourage them to participate (i.e. attend conferences). Third, the grant project within whose framework the course described above was developed also offers a 5-day workshop that trains educational developers in order to lessen the scarcity of local trainers. We invite interested course graduates to this training and considered them as potential colleagues who were trained to run educational trainings and courses. Last but not least, we encourage course participants to stay in touch with their coaches and peers and consult them about questions of teaching and learning even after the course has ended.

[1] To receive the SEDA certificate an external evaluator also assesses that the criteria were met.
[2] For the evaluation rubrics see supplement 7 of the O4-a category output.

References

Ho, A.S.P., Watkins, D. and Kelly M. (2001) 'The conceptual change approach to improving teaching and learning: an evaluation of a Hong Kong staff development Programme', *Higher Education* 42:2, pp. 143-169.

Pleschová, G. and Simon A. (eds.) (2018) *Early career academics' reflections on learning to teach in Central Europe*, London: SEDA, available: https://www.seda.ac.uk/Early-career-academics-reflections-on-learning-to-teach-in-Central-Europe, accessed 15 September 2019.

Postareff, L., Lindblom-Ylänne S. and Nevgi, A. (2007) 'The effect of pedagogical training on teaching in higher education', *Teaching and Teacher Education* 23:5, pp. 557-571.

By Mari Karm (University of Tartu) and Triinu Soomere (University of Tartu)

Supplement 5: Description of the educational development course for PhD students at the University of Tartu

Prepared as part of the collaborative project *Extending and reinforcing good practice in teacher development*, 2016-1-SK01-KA203-022551

Output O4-a: A comparative study of two programs for teachers in higher education and their outcomes

This version finalized on: 30 September 2019

Co-funded by Erasmus+ program of the European Union

By Mari Karm (University of Tartu) and Triinu Soomere (University of Tartu)

Course history

Doctoral education in Estonia makes use of a system coordinated with the Bologna reform. This means that over the period of their studies, PhD students take specialty, elective, and optional subjects for a total of 60 ECTS (proportions may vary somewhat among universities; however, specialty subjects constitute the highest percentage). The doctoral thesis is worth 180 credit points. Elective subjects are university-wide subjects aimed mostly at developing students' transferable skills (e.g. leadership and communication skills, academic writing, philosophy, or project management). Following the requirements set for the doctoral curricula, universities added electives aimed at developing pedagogical knowledge and skills. For example, Tallinn Pedagogical University included a pedagogical course in their doctoral curricula in 2003 and it was highly recommended for doctoral students of educational sciences.

In 2005, University of Tartu made changes in its curriculum of doctoral studies. The main goal of these changes was to enhance the development of transferable skills of doctoral students and to broaden their future career opportunities. There was also a need for lecturers at the university and using doctoral students as (future) lecturers was seen as a solution. Similarly to Tallinn Pedagogical University, a pedagogical course was also added to the list of elective courses for two reasons. First, a compulsory pedagogical practicum (6 ECTS) was added to the curriculum, which required all doctoral students to teach some lectures, seminars or tutorials, usually under the supervision of their supervisor of doctoral thesis. The other option was to supervise Bachelor's or Master's theses. Thus, the pedagogical course offered support for doctoral students to help them complete their practicum. Second, the course remained voluntary as the university leadership recognized that perhaps not all doctoral students see their future career at the university working as lecturers. Doctoral students do not have a requirement to teach at the university, they can take part in research projects and receive scholarships or stipends from research grants to supplement their doctoral allowance, therefore they were given the opportunity to choose another elective course. This pedagogical course for doctoral students named Learning and Teaching in Higher Education also offers 6 ECTS and is taught regularly at the University of Tartu since 2005. The course was designed by the team of lecturers working at various Estonian universities.

Beginning with the academic year 2013-2014, both a teaching practicum and the Learning and teaching in Higher Education course had been electives offered to all doctoral students in University of Tartu. In total there were thirty electives and students choose two electives to complete their studies. Since 2018, the teaching practicum has been discontinued and the pedagogical course was renamed to Learning, Teaching and Supervision. It is now one of the seven elective courses offered for 6 ECTS

Course design

Since the pedagogical course Learning, Teaching and Supervision at the University of Tartu is an elective course, it is offered university-wide and participants come from all fields and faculties: social sciences, humanities, natural sciences, mathematics, IT, and medicine. Guest participants from other Estonian universities also participate (e.g. Estonian University of Life Sciences, Estonian Academy of Arts, Tallinn University). Thus, course participants have different background. The frequency with which the course is offered has changed over the years. During the first years, the course was offered annually. In 2018, the course is offered twice a year for doctoral students: in the autumn semester in Estonian and in the spring semester in English. The number of participants in each group has been approximately twenty to twenty-five.

The general objective of the course is for the participants to adopt the learning-centred approach also in their own teaching after the course. The more specific aims of the course are threefold. Firstly, a shift in perceptions about teaching: the approach to teaching to become more learning-centred and ideas for active engagement of students in the teaching and learning process to

emerge. Secondly, for the course participants to find enjoyment in teaching and value it. If doctoral students experience learning-centred teaching, they are more likely to experiment with new methods and adopt a more learning-centred approach themselves. Thirdly, engage in conversation about teaching. As reflection, pair- and group work are an integral part of the course, doctoral students become more accustomed to talking about teaching. These conversations, if continued after the course, have the potential to enhance their teaching.

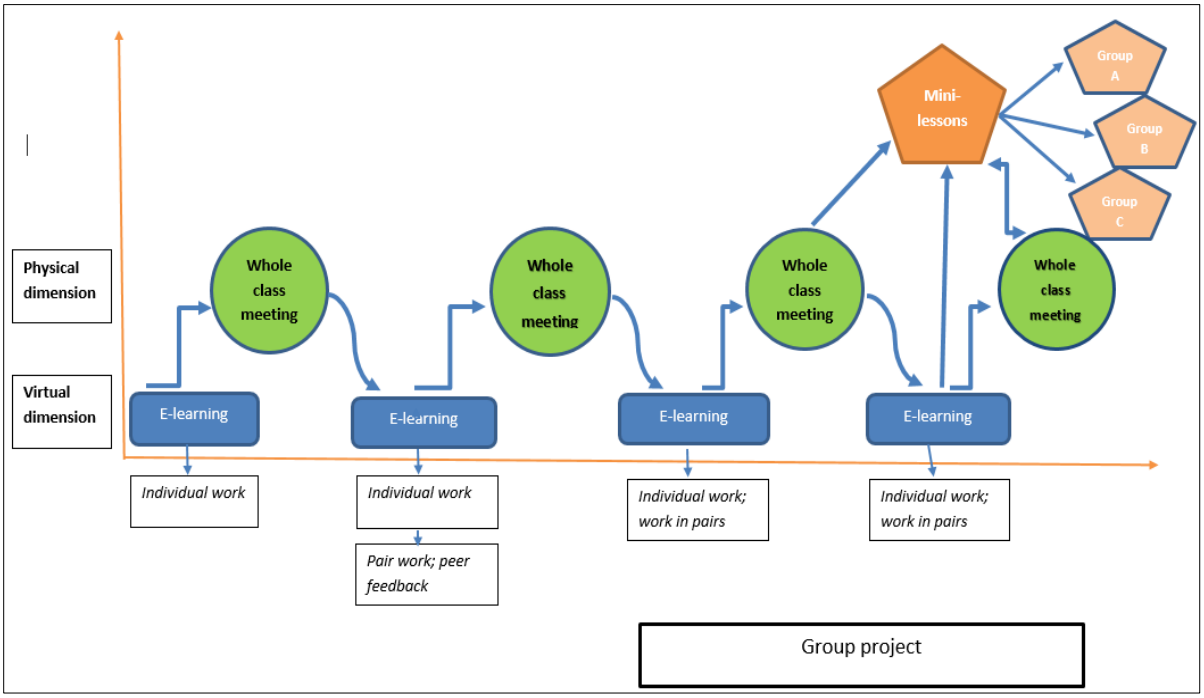
Table 1. Main themes and learning activities and methods of the course, Learning, Teaching and Supervision

	Themes	**Learning-teaching activities and methods**
E-learning	Flipped classroom. Teaching concepts. Students as learners. Adult learner.	Self-evaluation tests, reading tasks, learning log.
Meeting 1.	Deep and surface approach to learning. Learning theories. Pedagogical competencies.	Jigsaw, group discussions, discussions in pairs.
Meeting 2.	Course design (constructive alignment). Learning outcomes. Blended learning, Assessment for learning. Assessment criteria, assessment rubrics.	Think-pair-share. Peer feedback.
E-learning	Feedback to course syllabus Peer-assessment,	Peer-feedback. Reading articles (short essay)
Meeting 3.	Creating learning centred teaching environment (flipped classroom, PBL, project-based learning). Critical thinking.	Academic controversy, one-minute paper, videos, graphic organizers.
Meeting 4.	Students' active engagement in lecturers. Principles of group work.	Group discussion. Four corners. Padlet, Socrative, Mentimeter.
E-learning	Reading articles. Preparing group work. Preparing for mini-lessons.	Short essays
Meeting 5.	Supporting motivation. Mini-lessons	Mini-lessons, self-reflection tasks.
Meeting 6.	Supervision. Supervisor's role and tasks.	Case studies, role play.
E-learning	Pre-reading about supervision Group work. Preparation for mini-lessons.	Pre-test.
Meeting 7.	Feedback. Written feedback. Mini-lessons.	Mini-lessons
Meeting 8.	Ethical aspects of teaching Presentation of portfolios	Case studies

Learning, Teaching and Supervision was designed based on the following three principles: learning-centeredness, experiential learning and reflection. The most prevalent theme of the course was learning-centred approach to teaching. The aim is for the participants to experience the learning-centred approach to teaching during the course first hand. The course follows the principle of experiential learning and is taught using active learning teaching methods. Reflection tasks are used to reflect on previous experience as students and on experience gained during the course. One of the recently added feature of the course is to prepare participants to teach not only in a university but also in other, non-academic educational institutions to widen their opportunities for employment.

The course is one-semester long and based on blended learning (figure 1). Regarding the physical (or in-class) dimension of the course, the class meets once a month for two days resulting in a total of 8 face-to-face meetings. Between these meetings takes the virtual (or online) dimension, during which participants do independent work in Moodle. As students often work during their doctoral studies both in and outside the university, this setup allows working and out-of-town doctoral students to participate.

Figure 1. The structure of the educational development course for PhD students Learning, Teaching and Supervision course at the University of Tartu



The syllabus is provided at the beginning of the course but is open for some alterations based on participants' input. At the beginning of the course, each group of participants is asked for listing their learning needs. Based on these, there have been small differences in themes covered during the course each time. For example, in some groups more attention has been paid to learners with special needs, international students, SET or educational games. Sometimes guest lecturers are invited to discuss these special issues.

There are four assessment tasks in the course: a syllabus, micro-teaching, workshop plan and a learning portfolio. To demonstrate the understanding of the concept of constructive alignment, the principles of assessment and student engagement, participants create a course plan (syllabus) or revise an existing course plan following the learning-centred learning approach. They are also asked to give peer feedback to each other's course plans, which allows them to demonstrate their skills in giving formative feedback.

Second, participants are asked to deliver a 15-minute micro-teaching called a mini-lessons, which is followed by a 15-minute feedback session. Micro-teaching is organized in smaller groups (7-8 participants) and each group has also a mentor who is helping to facilitate the feedback giving process. The participants are asked to (1) use students' engagement techniques during the micro-teaching and (2) try a teaching strategy they have not used before. Afterwards, participants write reflections to analyse what they have learned from their own teaching or from participation and observations of fellow doctoral students' teaching. The purpose of the mini-lesson assignment is threefold: learn to use active teaching methods practice, giving feedback and hone reflection skills.

Third, participants are asked to work in groups and create a plan for a workshop for adult learners. The task is to plan a workshop to teach scientific concepts to adult learners. The goal of this task is to prepare participants for teaching also outside academia.

Forth, participants prepare a learning portfolio, which contains various shorter assignments that are written during the course, for example, an essay on learning and teaching, summaries and comments on articles that are read during the course, first meeting plan for supervisory process, learning log, interview with a professor, workshop plan, reflective texts created during the course.

The course is graded as pass or fail. Criterion for passing is the following: participation in face-to-face meetings and completion of all required learning tasks. Each task has its own evaluation criteria that is discussed with the participants.

By Torgny Roxå (Lund University) and Jennifer Löfgreen (Lund University)

Supplement 6: Description of the educational development course for PhD students at Lund University

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Output O4-a: A comparative study of two programs for teachers in higher education and their outcomes

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By Torgny Roxå (Lund University) and Jennifer Löfgreen (Lund University)

Introduction

The Faculty of Engineering at Lund University (LTH) is a research-intensive faculty home to approximately 8000 students, 550 doctoral students, and 600 faculty. Since 1993, pedagogical training has been offered to all members of the teaching staff at LTH, initially as optional professional development and in more recent years as a requirement for employment in any position that involves teaching. Initially pedagogical training was paid for with external, national funding earmarked for professional development of academic teachers, but from the end of the 1990s it has been funded directly by the faculty as part of LTH's local academic development unit, Genombrottet.

The philosophy of change that governs pedagogical training at LTH is founded on the idea that if teachers talk to one another about their teaching, and if these conversations are informed by research and theory and are based on real observations of teaching and learning, then a culture that values teaching and learning will evolve in the faculty and teaching and learning will improve. In order to realize this idea, pedagogical training at LTH aims to bring teachers together to explore concepts and theories of teaching and learning, discuss ideas with colleagues both in pedagogical courses and in their home teaching contexts, and complete concrete and focused projects, sometimes individually and sometimes in groups, that yield artefacts that document their work and can be shared with others at LTH. An essential element of this strategy is a scholarly approach to teaching and learning (Boyer 1990), following the principles of the scholarship of teaching and learning (SoTL) (e.g. Felten 2013), in which theory and evidence are required to make credible claims about teaching and learning. All pedagogical courses offered at LTH follow this general approach, which has also influenced such policies and initiatives at LTH as criteria for promotion, quality assurance for degree programs, student evaluations of teaching, a pedagogical academy to reward excellent teaching practitioners, and a local biennial pedagogical conference. The course offering at Genombrottet includes a large introductory course aimed at doctoral students, Introduction to Teaching and Learning in Higher Education, a complementary course directed at more experienced faculty members, a series of more narrowly focused courses (i.e. The Good Lecture, Subject Didactics, Supervision in Theory and Practice, Collegial Project), and courses that support faculty seeking specific positions or titles (Docent Course, Pedagogical Portfolio Workshop).

Early versions and evolution of the course for doctoral students

The current format of the course has evolved since its inception in 1993. The first pedagogical course (1992) for PhD students at LTH was a 120-hour course focused on how to present your research. It had a smaller component discussing pedagogical techniques and perspectives. Later (1996) LTH introduced a three-hour seminar for doctoral students dealing entirely with educational matters, such as communication, lecturing, and approaches to learning.

In 1998 a week-long (40-hour, Monday to Friday) course was developed. In this course, participants worked in groups, a shift that was intended to increase discussion between participants and thereby enhance reflection. The focus of this course was the transfer problem, the problem to apply things in context different from the one on in which they were learnt, e.g. to apply what is learnt during a pedagogical course during practical authentic teaching within a department. During this course participants completed a group-based project, which they presented orally together with a written report on the Friday afternoon of the course, and participated in seminars on student learning and teaching methods and in an activity called teacher X.

Teacher X was an activity designed specifically to overcome the transfer problem. On the first day of the course, participants were given a text describing an authentic teaching problem, and told they were to act as pedagogical consultants to help teacher X. The real teacher X was an experienced teacher who remained unknown to the participants, but who corresponded with

them anonymously in writing throughout the week via the course leader. On the Friday afternoon, teacher X joined the course group and discussed his or her experience during the week. This was a rewarding activity but it was also labour intensive for both the course leader and teacher X.

In 2002, the course grew to eighty hours, with the full week of class preserved and the group project extended over several weeks. Teacher X disappeared at this point because of the complicated logistics. This course, with minor alterations over the years, has evolved into the course described above in detail below.

The driving force for the evolution of the course has been threefold: 1) the transfer problem i.e. securing relevance and that the learning in the pedagogical course became useful during everyday practices in departments; 2) the socio-cultural insight that conceptions of teaching are formed during interaction, preferably with those who are significant to the course participant; 3) a limited course like this (sometimes the only course of its kind the participants will ever attend) must result in a memory mirroring education and pedagogy as an inspiring and intellectually intriguing area, or else the course would only be time wasted.

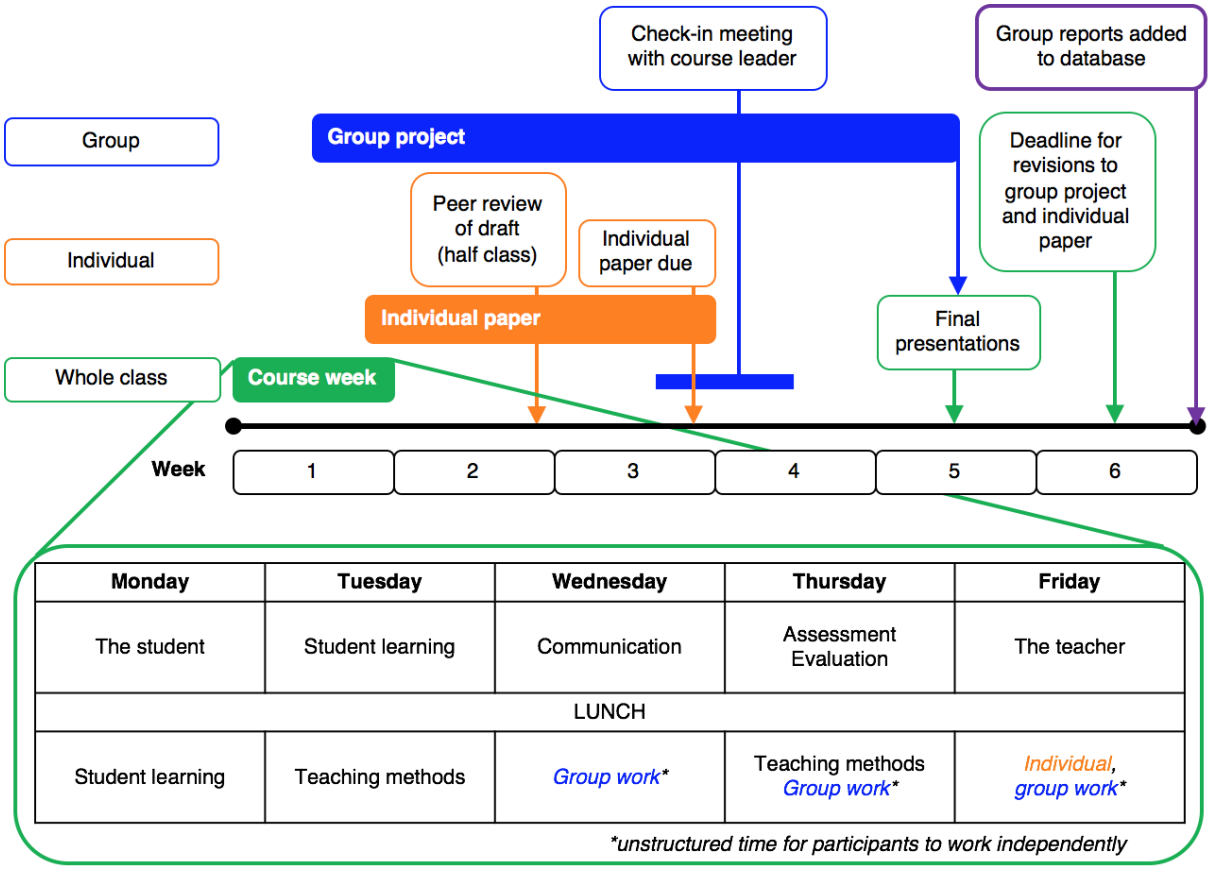
Introduction to Teaching and Learning in Higher Education – the course

The course, Introduction to Teaching and Learning in Higher Education known locally as The Intro Course (Introkursen in Swedish) is offered four times a year (twice in English, twice in Swedish). All doctoral students at LTH who have teaching as part of their position[1] are required to take the intro course as part of their course work in their doctoral studies. This course has twenty-five participants each time. It has been offered for more than ten years and has had over a thousand participants. The aim of the course is to introduce the participants to ideas about higher education teaching issues, thus preparing them for taking decisions in teaching that benefit students' learning. An additional aim of the course is to provide the participants with a foundation for further professional development as a teacher in higher education.[2]

The majority of participants are doctoral students.[3] The participants require their supervisor's approval to apply for the course. Before each course session starts, the course leaders divide the twenty-five participants into groups of five, trying as much as possible to group the course participants together by discipline. We do this in an attempt to give our course participants as much common ground as possible when it comes to discussions about teaching and learning in their context, because we believe that novice teachers (which doctoral students often are) can benefit from shared experiences when discussing teaching and learning. There would be different benefits to trying to build groups that are as diverse as possible, but in the case of our course, we have chosen to aim for similarity, at least in major disciplinary category.[4] We explain this strategy to the participants on the first day of the course as a way to allow them to assess educational concepts against the needs of their respective disciplines.

[1] PhD students normally are required to teach up to 20 per cent of their time, usually as lab demonstrators and tutorial leaders. Some PhD students have external funding that prohibits them from teaching; they are still allowed to take the course if they want but it is not compulsory.
[2] The course syllabus is available online at http://www.lth.se/fileadmin/lth/genombrottet/KursplanGEM002F_Introkurs__eng.pdf.
[3] We sometimes allow one or two senior staff to join the course if they have not previously had the opportunity to take a pedagogical course. Usually these are postdoctoral fellows or newly hired faculty members. These participants often come from outside Sweden and take the course in English.
[4] This is not always easy. We try to at least group fields together. In cases where we simply cannot create complete groups (for example, where we have six people from a given field), we always try to avoid building groups where someone is 'alone' (if we have six people from a field, we will put three into each of two groups, rather than making one group of five with one person left over).

Figure 1. Overview of the structure and assignments educational development course for PhD students, Introduction to Teaching and Learning in Higher Education, at Lund University



The intro course involves a total of three weeks of full-time work (120 hours) usually spread over six weeks, and is valued at 5 ECTS. An overview of the course structure is shown in Figure 1. The first part of the course consists of five full days of intensive classroom work where all participants engage in a variety of activities, mostly in their groups. During this week, we explore topics that cover the most important things university teachers need in order to begin developing their pedagogical competence: deep and surface approaches to learning (Marton and Booth 1997), constructive alignment and the SOLO taxonomy (Biggs and Tang 2007), communication in and outside the classroom, assessment and examination, evaluating teaching (Ramsden 2005), and teaching careers, including ways to convey pedagogical competence through a teaching portfolio (Olsson and Roxå 2013). In the exploration of these different topics, we use a range of the relevant literature from educational research and related fields, which offers intellectual tools to help the participants better understand the pedagogical reality in which they work. We use a combination of lectures, activities, discussions, microteaching, and small tasks to explore the different topics in the course and to demonstrate different teaching methods.

Following this classroom week, during the second part of the course participants work on both an individual paper and a group project, the latter of which they present at the end of the course. First, they work individually on a reflective paper. In this task, each course participant chooses a teaching situation in higher education that they have experienced first-hand, either as a student or as a teacher, and explores that situation from the perspective of any relevant pedagogical concepts, models, and theories that we have addressed during the course week or that they have found on their own. This 1-2-page long text must include a brief description of the situation, an analysis of it using relevant pedagogical literature, and a suggestion for how the situation could be made better (regardless of whether it was initially problematic) in light of the pedagogical analysis presented. Each participant comes to a peer feedback session about their paper where

they exchange oral feedback in a structured face-to-face discussion with two other course participants. The goals of this session is to allow participants to see how their peers are approaching the task, to check that they are on the right track with their work, and to receive feedback from readers, which may help them improve their work. In addition, each participant discusses their draft with a critical friend of their choosing, normally a more experienced teacher from their home teaching context. The purpose of this is to encourage participants to discuss what they are learning with other teachers in their regular teaching context and to receive more discipline-specific feedback on their analyses. The final draft is due during the third week of the course. This assignment aims at giving individuals a chance to explore a personal experience in a way that mirrors the type of reflective analytical writing our faculty members do when they apply to the Pedagogical Academy at LTH, thereby the assignment constitutes a brief introduction to how to write a teaching portfolio. In case an individual paper does not meet the assessment criteria, participants are given time to revise and resubmit their work.

Second, during the first week of the course, each group chooses a topic for their project and discusses it with the course leaders. This topic can be anything they find interesting or relevant, and can address any aspect of teaching and learning in higher education. Past topics have ranged from practically oriented studies of first-year undergraduate laboratory teaching to more nuanced theoretical discussions of the relationship between doctoral students and their doctoral supervisor. Sometimes the project involves gathering new empirical evidence, often in the form of questionnaires or interviews. Other times the projects are literature reviews that aim to synthesize research or publications in a given area in order to inform practice or answer a particular question about pedagogy in higher education. Use of and referencing to relevant pedagogical literature is a requirement in the course project, and we offer guidance to groups in searching the literature. Overall, we find that our course participants are quite good at incorporating a broad range of fairly advanced literature into their project reports. In the second half of the course each group meets with one of the course leaders to discuss their project and its progress. This feedback meeting is an important checkpoint and allows the course leaders to support the groups in completing their projects. This meeting is the only compulsory checkpoint although groups are encouraged to communicate with the course leaders as needed.

The group project culminates in a course finale where each group presents their work. Two days before the finale, all groups email their 8-10-page report to the whole class, and all participants are required to read all other reports before the finale. Another group in the course acts as opponents during each presentation, asking questions and probing aspects of the project. Based on the feedback each group receives on this day from both their peers and the course leaders, they make final revisions to their project report. Once the final versions of all project reports are submitted, the reports are published in a local password-protected database that all staff at LTH (including doctoral students) can access.[5]

The three segments of the intro course build on one another in their demand on participants to engage in SoTL, first by requiring participants to talk to one another about various topics and relate their conversations to theory and literature presented by the course leaders, then by choosing a very small idea to explore individually, and finally by exploring a more substantial issue in a team and producing a public artefact. Perhaps most importantly, the design of the course is targeted at changing things *outside* the course and changing them according to an overall philosophy of change. The purpose is to change how teaching and learning is being talked about within departments and discipline-based communities. The course is assessed as pass or fail. To pass the course participants must have attended at least eighty per cent of the scheduled course activities including a peer review session and the final presentations, passed the individual paper assignment, and passed the group project assignment.

[5] This database contains project reports for many of our pedagogical courses, and serves as an inspirational and valuable repository of pedagogical work that doctoral students and faculty at LTH have undertaken. This database contains over 600 items from courses dating back to 2001.

References

Biggs, J.B. and Tang, C. (2007) *Teaching for quality learning at university*, 3rd ed., Maidenhead: McGraw Hill Education and Open University Press.

Boyer, E.L. (1990) *Scholarship reconsidered. Priorities of the professoriate*, New York: The Carnegie Foundation for the Advancement of Teaching.

Felten, P. (2013) 'Principles of good practice in SoTL', *Teaching & Learning Inquiry: The ISSOTL Journal* 1:1, pp. 121-125.

Marton, F. and Booth, S. (1997) *Learning and awareness*, Mahwah, NJ: Lawrence Erlbaum Associates.

Olsson, T. and Roxå, T. (2013) 'Assessing and rewarding excellent academic teachers for the benefit of an organization', *European Journal of Higher Education* 3:1, pp. 40-61.

Ramsden, P. (2005) *Learning to teach in higher education* (2nd ed.), London: RoutledgeFalmer.

By Agnes Simon (Masaryk University)

Supplement 6: Impact narrative for educational development activities at Masaryk University and the University of Economics

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By Agnes Simon (Masaryk University)

Introduction

This study analyzes the impact of educational development activities conducted through the Erasmus+ project Extending and Reinforcing Good Practice in Teacher Development. Since the project had a limited time of three years to exert impact it does not have the kind of effect than the more mature educational development initiatives at the University of Tartu and Lund University. Nonetheless, the course for doctoral students, Extending and Reinforcing Good Practice in Teacher Development and the one for academic developers, Training Program for New Educational Developers, activities to build a community of practice and propagating course results formally and informally give a good range of activities to analyze. The analysis is arranged according to Kreber and Brook's (2011) six levels of impact of educational development.

Data and methods

Results for the doctoral course Extending and Reinforcing Good Practice in Teacher Development are based on the first cohort of participants from the 2017/2018 academic year. Data was triangulated using a variety of sources to obtain a complex understanding of the individual-level impact of the project. The first three sources are qualitative: (1) the post-course interviews with the course graduates, (2) post-course interviews with coaches and (3) an interview with the project manager. Where available, qualitative evidence from other sources such as email correspondence, personal discussions and the webpages of MUNI and EUBA were also used.

The other two are of quantitative nature and include, first, survey data based on questionnaires that the twelve course graduates filled out at three different stages of the course: before the beginning of the course, after the eight-day summer school and at the end of the course. This data was analyzed in a pre-post design. Second, works submitted by course participants were also used: the teaching essay submitted with their application and three key course assignments—microteaching reflection paper, teaching innovation reflection paper, and statement of teaching philosophy. Regarding the latter, the evaluation was carried out by the coaches except for the application material, which was evaluated by the project manager. The evaluation was done using a rubric that was developed specifically for the measure the impact of the three learning objectives objectives: student-centeredness, reflective and critical thinking and the use of pedagogic theory. Assignments were evaluated at four levels: none, low, medium, high (table 1).

Table 1. Rubric for the evaluation of the course objective of reflective and critical attitude to teaching

Categories	Coding	Definitions
Student-centeredness		
High-level	3	Teacher pays a lot of attention to who his/her students are and how they learn, so that good learning can occur. Teacher has embraced student-centeredness in a complex way, and there are not any parts where teacher contradicts herself using statements that demonstrate teacher-centred approach.
Mid-level	2	Teacher only pays some attention to who his/her students are and how they learn, so that good learning can occur. Teacher has embraced some elements of student-centeredness; there are no parts where teacher contradicts herself using statements that demonstrate teacher-centred approach.
Low-level	1	Teacher pays little attention to who his/her students are and how they learn. Teacher has only embraced one or two elements of student-centeredness; there are parts where teacher contradicts herself using statements that demonstrate teacher-centred approach.
No	0	No evidence at all

Reflective and critical attitude to teaching		
High-level	3	Teacher demonstrates that he/she has thought about the reasons of why good/poor quality learning occurs at his/her students; these reasons are summarized in a clear and comprehensive way and seem realistic. Teacher can identify not only positive but also negative/problematic aspects/outcomes of own teaching and assumed reasons for them. Teacher may also demonstrate the connections he/she can see between own research and teaching. Based on this understanding, teacher can suggest changes for the future teaching and their expected effects on student learning.
Mid-level	2	Teacher demonstrates that he/she has thought about the reasons of why good/poor quality learning occurs at his/her students. Teacher analyses negative aspects/outcomes of own teaching and their reasons only to a small extent. Teacher can suggest some changes for the future teaching but cannot explain well their expected effects on student learning. Reflection and critical attitude is demonstrated throughout the text but only relates to some of the following: planning, implementing and evaluating own teaching.
Low-level	1	Teacher demonstrates that he/she has thought about the reasons of why good/poor quality learning occurs at his/her students, but he/she could not summarize them in a clear and comprehensive way, they are only outlined and/or do not seem realistic. Teacher cannot identify negative aspects/outcomes of own teaching and assumed reasons for them: the evaluation of the effects of own teaching is uncritically positive. Based on this, teacher cannot suggest changes for the future teaching and explain their expected effects on student learning. Reflection and critical attitude is demonstrated in a few parts of the text, these are disconnected and related only to only some stages of teaching (planning, implementing and evaluating own teaching).
No	0	No evidence at all
Use of theory		
High-level	3	Teacher can properly and correctly define one or several concepts/theories or principles related to teaching and learning in higher education (i.e. using own words). Theory is used to design (a new way of) learning for the students. The teacher uses the chosen concept, theory or principle to explain the outcomes of student learning.
Mid-level	2	Teacher demonstrates familiarity with one or several concepts/theories or principles related to teaching and learning in higher education. These are properly and correctly defined (i.e. using own words). Theory is used to design learning for the students. The teacher, however pays little attention to how the described concept, theory or principle can explain the outcomes of student learning.
Low-level	1	Teacher demonstrates familiarity with one or several concepts/theories or principles related to teaching and learning in higher education. These are not properly defined (i.e. using own words) or the definition reveals misunderstandings. The teacher does not use the chosen concept, theory or principle to explain the outcomes of student learning.
No	0	No evidence at all

For the statistical analyses, the chi-square was used to compare categorical data (such as the course objectives) and paired t-tests were employed to analyze numerical variables. Both tests are evaluated against the significance level of p=0.10 rather than the customary p=0.05 because of the rather small sample size in case of the chi-square test and the unidirectional expectations about an increase over time in case of the t-test.

Retention rate

Of the eighteen participants who started the summer school, twelve has completed the course.[1] Even considering that the course was voluntary and has added to the already busy schedule—of often also working—PhD students, a sixty-seven per cent retention rate may not seem impressive. However, it is normal or even slightly above average in the local context: it is nearly identical with the retention rate of similar to recent non-compulsory student-centered teaching and learning courses—for either faculty or PhD students—in the region (Vanderziel et. al 2019; Duschinská and High 2018). At the same time, completion rate is significantly higher than under a past project implemented for the Slovak Academy of Sciences where only 39 per cent of participants graduated from a similar one-year course (Pleschová and McAlpine 2016).

Level 1: Participants' satisfaction

During the post-program interviews participants were asked if they would recommend the course to others and why or why not. Eleven out of twelve participants said they would recommend the course and cited a variety of reasons: the course changed their approach to teaching, improved their teaching, helped them to new knowledge, increased their confidence, and offered an opportunity to exchange ideas about teaching with peers and more experienced educators. The person who said she would not recommend the course[2] still found the course worthwhile and, along with three other participants, she revealed that she already recommended the course to others.[3] In addition, the majority of participants explicitly mentioned during their interview that the course was useful or beneficial for them as teachers.

However, when asked if they thought the course should be made compulsory, participants were divided in their answers: six thought the course should be made compulsory citing the fact otherwise PhD students have to teach but do not know how and therefore often feel left alone with their struggles and fears, and that the course offers and opportunity for 'personal and academic growth' as one of the participants put it. Although the other six course graduates did not think that the course should be made compulsory because not everyone is interested in teaching, but four of them thought that this course should be on offer in their doctoral program as an elective, while one suggested that some teaching course should be available to doctoral students even if not this particular one, or not this one alone, because of the current course's very specific—student-centered—approach to teaching.[4]

Participants valued the coaching component of the course very highly. When asked in the post-course survey to rate their coaching experience on 10-point Likert scale, where 1 was entirely negative and 10 entirely positive, participants' means score was 9.5 (SD=0.78). Accordingly, when

[1] An additional participant graduated with the second cohort.
[2] The reason why she could not recommend the course were because her department did not acknowledge the 10 ECTS credits offered by the course, she felt that her field was too close to pedagogy and therefore she learnt relatively few new things and she did not see how the teaching innovation reflection paper improved her teaching skills. It is important to note that she was also the participant who came to the course with already having taken a course based on student-centered approaches.
[3] From personal discussions we also know that others did similarly and at least a few members of the second cohort was encouraged to take the course by former participants.
[4] The one student who did not think the course should be part of the PhD curricula at all justified her position by it being too time-consuming.

asked to select the negative aspects of the coaching relationship from a list, only five respondents did actually choose something and blamed themselves for not having enough time or having limited teaching competencies to fully benefit from the relationship, while two believed that the online nature of the coaching experience was a drawback. The others specified in the open-ended section of the question that they found no drawbacks to the coaching experience. They talked of the relationship with their coach in the highest terms both in general: 'It was really professional and human at the same time. Very consistent and motivating', and in particular: 'Being coached gave me confidence that I can consult and ask for guidance for my teaching problems'). One person indicated that this has affected how she approaches the relationship with her students because 'It was one of the most useful teacher-student relationships I ever had. I am trying to emulate the way how my coach helped me with my assignments'. In the post-course interviews, participants reiterated their positive experiences.

Levels 2 and 3: Participants' beliefs about teaching and participants' teaching performance

Regarding their conception of teaching and learning, graduating participants (n=12) were asked to assess both at the end of the summer school and the online course segment if their attitude toward teaching changed compared to how they thought about teaching before the beginning of the program. In both cases 75% percent (n=9) of the participants answered positively, while 25% (n=3) reported no change. However, only one participant reported no change at both measurement point, possibly due to a pre-course commitment to student-centered education.

When asked to describe the nature of this change in attitude eight of the nine participants who reported a change after the summer school mentioned a shift toward a (more) student-centered approach either in an abstract sense: 'Moving towards more student-oriented approach' and 'I realised that students have to be responsible for their learning and that teachers' role is to help them with it'; or a more practical sense: 'My 'approach to teaching has moved towards the necessity to include leaning activities in my lessons' and 'cutting whole 90minute session into several small ones, including some small group activities into learning in the class'. Three participants found it important to mention that they gained 'better theoretical foundations' while one participant brought up the importance to reflect on one's teaching practice as a game changer for him.

Answering the same the questions after the end of the course, answers were similar. Six of the eight participants who answered this question (one participant reported a change but did not describe its nature) mentioned student-centeredness, while three emphasized the impact of theoretical knowledge on their thinking as well as practice, for example, one pointed out 'I have started thinking about teaching more, I started preparing structure of my classes' while another said 'that I have started thinking about [theory], I became more aware and more conscious about my teaching decisions […] the choices that I had previously done intuitively I now do with greater awareness in terms of their pedagogical impacts'. One participant found himself become 'more reflective about teaching and learning'.

Participants already referred to changes in their practice above, which foreshadowed positive answers to the next questions where they were asked about change in their practice. Indeed, all eleven participants who taught before enrolling in our course left the summer school with a desire to change some aspect of their teaching practice mostly by introducing more varied, more appropriate and interactive learning activities into their classroom and turning to self- and peer assessment—and all but one reported a change in their practice after the completion of the course. Introducing new assessment methods, new learning activities are still the most common themes after the course, even though they are less prevalent than the ones had been after the summer school.

As it was referred to above in their praise of the theoretical foundations that they gave during the course, their knowledge about teaching and learning was also positively impacted. Participants

were asked to assess their knowledge level of teaching and learning on 10-point Likert-scale (1=very little; 10=a lot) before the course, after the summer school, and after the course. The difference between their self-reported knowledge at the beginning of the course and the end showed a 2.33 increase in means ($mean_{PRE}$=4.67, SD_{PRE}=1.88; $mean_{POSTC}$=7.00, SD_{POSTC}=1.95; n=12), which was also statistically significant (t= -4.31; p=0.001; df=11). However, it is clear that for this increase in knowledge it was their participation in the summer school that was responsible: there is 1.67 increase in their mean knowledge level between the beginning of the course and the end of the summer school ($mean_{SSCHOOL}$=6.33, $SD_{SSCHOOL}$=2.31), which is statistically significant (t=-3.58; p=0.002; df=11). On the other hand, while there is still and increase in the mean difference (0.67) in the participants' knowledge between the end of the summer school and the end of the course, this does not reach statistical significance (t= -1.23; p=0.121; df=11). This is expected as the focus of the summer school was on familiarizing participants with the most fundamental concepts of teaching and learning, while the online course focused on putting this knowledge into practice. During the online course what they learnt about theory came primarily from the conceptual literature they overviewed for building the theoretical expectations in their reflection paper. In other words, the online course segment served to reinforce and deepen in one area rather than widen their knowledge.

The change in confidence was brought up by a few when asked about their confidence as a teacher and analysis similar to the one examining their knowledge level revealed comparable trends (see table 2). Although compared to their confidence before the summer school, they felt significantly more confident both after the summer school and the completion of the course, but the increase in confidence after the summer school only approaching, but does not reach statistical significance. This suggests that increase in knowledge has a positive impact on confidence, while the impact of practice might be less straightforward on one's confidence as teacher. Indeed, practice may bring both good and bad experiences that could minimize or hinder a growth in confidence. More importantly, gains in confidence also impacts one's behavior and practice in the classroom as one participant noted: 'I became more confident as a teacher which made me in turn more responsive to students' needs in the classroom'. In the post-course interviews participants have also brought up spontaneously that the positive changes in their confidence.

Table 2. Comparing the level of participants' confidence as teacher before the program, after the summer school and after graduation

	N	**Mean**	**SD**	**Difference of Means**	**t-test**	**df**	**p-value**	**Sig.**
Pre-course	12	5.33	2.43	1.00	-3.07	11	0.005	Yes
Post-summer school	12	6.33	2.02					
Post-summer school	12	6.33	2.02	0.83	-1.70	11	0.058	No
Post-course	12	7.17	1.90					
Pre-course	12	5.33	2.43	1.83	-3.12	11	0.005	Yes
Post-course	12	7.17	1.90					

Tests: Paired t-test, one-tailed.

All in all, based on participant's self-evaluation, it is fair to say that on the immediate and short run the impact of the program was positive: it brought a desired change in their teaching conception and practice toward student-centeredness, and it effected an increase in their knowledge of theoretical teaching and learning as well as in how confident they feel as a teacher.

Evaluating participant beliefs based on how they met the three course objectives—student-centeredness, reflective and critical thinking, and the use of theory—in their course assignments leads to a somewhat more mixed. Regarding the differences in the participant's general view of teaching, the participants' application teaching essay was compared with the final version of their

statement of teaching philosophy completed at the end of the course whereas to see how participants' thinking about a particular teaching episode evolved, I contrasted with their microteaching reflection papers with the teaching innovation reflection paper. Regarding student-centeredness, the comparison of the two refection papers show a statistically significant improvement in this area (χ^2=7.2; df=2; p=0.027) but not the comparison of the teaching statements (χ^2=3.273; df=2; p=0.195). It is possible that, as coaches noted, those who applied to our course were already predisposed to a student-centered philosophy and had little room for improvement, whereas they were much less well-versed in putting student-centeredness into action and, hence, the course was beneficial to them in this area. Student-centeredness was also the most often referred of the three course objectives in post-course interviews by participants.

Based on the results, the course had limited impact on participants' ability to reflect critically upon their teaching either in general (χ^2=4.0; df=3; p=0.261) or in particular (χ^2=0.444; df=2; p=0.801). Although it would be possible that coaching may have washed out the natural differences between early and late course work, such a hypothesis was not confirmed—a comparison of the first drafts of the reflection papers result also in no statistically significant differences (χ^2=2.333; df=6; p=0.887). Another likely explanation for this non-finding is the very detailed instructions in case of all four assignments that were very specific about the kind and mode of reflection that participants were asked to engage in. Thus, providing the detailed description that the SoTL finds ideal, might have washed out the spontaneity from participants' responses and resulted in the no-finding. It is also possible that participants' academic writing abilities kept them from presenting their reflective arguments clearly and in detail. This position is supported by the fact that those participants who had a chance to continue working on their paper and turn them into book chapters (Pleschová and Simon 2018) for the book that was published under this very same project has shown clear improvement in reflections.

It is the use of SoTL theories and concepts where the impact of the course is most noticeable. A statistically significant improvement could be seen in both comparing thinking about teaching approaches (χ^2=8.40; df=4; p=0.078) and about teaching practices (χ^2=7.556; df=3; p=0.056). It is also an area that coaches often named where they saw the most changes in their coachees' development. Indeed, participants themselves brought this area up a few times as the area where they improved a lot.

Levels 4 and 5: Students' perception of participants' teaching and student learning

The evidence about these impact categories are limited. First, systematic data regarding students' perception of the participants' teaching or the students learning is not available. Although both Masaryk University and the University of Economics administer course evaluations, I do not have access to these. They are also likely not being overtly useful as several participants noted in their post-course interview that too few students fill out the form. Second, as alternative the data from the participants' own evaluation of the impact of their teaching innovation on students is available. However, these reflection papers followed the requirements of SoTL impact research on a small scale and, since participants taught differing number of class sessions, occasionally very different type of students in varying disciplines, and collected different types of data that they all analyzed with the most fitting methods, these give sporadic and widely differing data on participant teaching. Furthermore, even where data is available, it only evaluates one particular teaching episode in their career that does not allow for conclusions about their development as teachers. Nonetheless, the reception of student-centered teaching methods as well as student learning varied greatly. In the future, we should revisit with the institutions and our participants to learn more about these aspects of teaching and learning.

Level 6: Institutional culture

The evaluation of the course's impact on institutional culture is especially challenging not only because of the many other factors that influence institutions—for example, while pursuing this project our team discovered two other similar initiatives at Masaryk University—but also because our efforts to leave such an impact went beyond simply letting individual participants of this doctoral course spread the word and especially because the short existence of the course.[5] Therefore, in this section I describe the activities that were undertaken in order to exert an influence beyond the individual level and that have the potential to influence the institutional cultures at both MUNI and EUBA.

In addition, the existing institutional cultures differ at MUNI and EUBA, which are best exemplified their reception of our program although bureaucratic issues have interfered at both places. The project has met a more open and supportive environment at Masaryk University; MUNI places more emphasis on good quality teaching as evidenced by its mission statement—developed independently and prior to this project—and strategic plans (Mission, Values and Vision 2018; Masaryk University strategic plan… 2019). However, the larger scale of the university makes it harder to leave an impact. We also realized that doctoral students at MUNI cannot use the 10 ECTS credits that this course offers to satisfy the credit requirements of their doctoral program: the course should be on the books for each doctoral program for it to be eligible as designers of the doctoral programs did not count with the fact that anyone would wish to take a course whose focus is outside of their field of study. It was beyond the capacity of the current project.

At the University of Economics, the primary concern is raising the research profile of the faculty and teaching seems to take a secondary role: neither the mission statement nor any other documents beyond this project's website hosted at the EUBA portal (Extending and reinforcing... 2016) deals with quality teaching on their homepage. Accordingly, it did require some creativity in figuring how to comply with contradictory, national, grant agency, and institutional regulation and finding the right persons to gain support for the course. During the accreditation of the course, the project manager felt that we are seen as having caused an unwelcome bureaucratic problem rather than offered a new opportunity for the university and was positively surprised when the course was accredited at the end. Similarly, EUBA seems to be more cautious about the authorization of spending money for which they will later be reimbursed by the grant agency.

Networking

Course participants talking to members of their various teaching and research networks that include peers and faculty members has been an important way to gain visibility and did help in recruiting for the second year of the program. While it has been argued (e.g. Roxå et al. 2011) that this kind of networking can be effective together with the growing number of participants in changing how people talk about teaching and how they actually teach, the short, three-year, existence of this educational development initiative are unlikely to result in change institutional culture even at the most basic—departmental—level. Our graduates try to exert influence in other ways: for example, one decided to volunteer to contribute to the redesign and reaccreditation of the departmental curriculum by co-designing a course based on the principles he has learnt during the program. These efforts, however, may also exert influence only over a longer period of time.

[5] In addition, not all our participants completed the teaching requirement of the course in their home institutions—i.e. MUNI and EUBA—one participant split their teaching between her home institution and the University of Tehran, Iran), while another one taught all his sessions at a different university in a different country (AAB College, Kosovo), which also influences how much impact we could have on the grant participating institutions.

Project staff consciously cultivated existing relationships and sought out new opportunities to make allies in both institutions. With the consent of our participants, we have reached out by sending personalized letters to their supervisor and/or department heads in both participating institutions to familiarize them with the course and encourage them to support the participant's effort. At Masaryk University, during our earlier similar initiatives at Masaryk University, Vice-Rector for Development Markéta Pitrová showed unwavering support and she remained a close ally during the current initiative as well. At MUNI, we have also established a good working relationship with CERPEK that through a different grant projects started out to establish a similar teaching course for faculty members. We have also come into contact with the Faculty of Informatics that runs a semester-long teaching lab called DUCIT to improve participants' teaching. They also organize the annual Open Space conference on e-Learning. We maintain these relationships by personal meetings, involving each other for our conferences[6], and third-party events that project members are involved with[7].

Efforts of similar nature took longer to come to fruition at the University of Economics in Bratislava. We have identified potential allies, such as the Pedagogical Department which was designated as the host of our course during the accreditation process and which shared the project's interest in improving the competencies of the teaching personnel—faculty and PhD students alike. The breakthrough came after we invited two members of the Department of Pedagogy to the Training Program for New Educational Developers. It helped them to overcome the inertia that had arisen from the negative reception of their earlier attempts to start an exchange of views about teaching and learning as evidenced by the informal, 90-minute long EduBreak discussions on teaching and learning on January 29, 2019 that were attended by sixteen faculty members and doctoral students. This is planned as a recurring event and, accordingly, the second of such meetings took place at the beginning of March. We have also involved Drs. Pasiar and Novák in the research evaluating the impact of this course and Dr. Novák travelled to the Swedish project partner to study how educational development is done at Lund University.

Multiplier events

A requirement of the grant agency that we hold several multiplier events in order to promote our course and gain wider recognition. We have organized such multiplier events at MUNI and EUBA. While these multiplier events are aimed at a wider—national and international—audience, they also offered a good occasion to call attention to our program locally and cooperate with allies at MUNI by inviting them to participate in the event. However, for larger visibility in the participating institutions and thus greater impact on institutional culture, it would have been more beneficial to focus these events on local faculty and administration.

Scholarship of teaching and learning

Under the aegis of this project, an open source book based on the best teaching innovation reflection papers that course participants have written during the course was put together (Pleschová and Simon 2018). Even though the book has originally been envisioned as an intellectual outcome that showcases the course itself and connects participants with the larger SoTL literature, it has the potential of leaving an impression on both participating institutions.

[6] For example, Dr. Pleschová presented at the 2017 (https://cerpek.muni.cz/pro-zajemce/konference/vysokoskolsky-ucitel-znovu-studentem) and 2018 (https://cerpek.muni.cz/pro-zajemce/konference/vysokoskolsky-ucitel-znovu-studentem-1) conferences organized by CERPEK while the academic guarantor and coordinator of CERPEK, Jeffrey A. Vanderziel has participated at our multiplier event in February 2019.

[7] For example, Dr. Pleschová who was involved with the BLASTER project has made sure that our project as well as CERPEK is represented at the workshop that the event.

The books offer a glimpse on what can be done even under the current institutional constraints and may inspire other faculty members to (1) engage in a discussion about it or (2) apply similar teaching methods in their own courses. However, for this to happen, a wider awareness of the book is required at both institutions. To facilitate such a discussion, we have invited Petr Sucháček from Masaryk University to contribute to the series blog post that accompany the online publication of each chapter.

Furthermore, a multiplier event was held at both institutions where local faculty interested in issues of teaching and learning could meet each other and foreign experts and learn more about this project in general and the doctoral course in particular.

References

Duschinská, K. and High, R. (2018) 'Program Rozvoje pedagogických dovedností na Univerzitě Karlově: Didaktika vysokoškolské výuky a přesahy do dalších discplín [Educational competences development program at Charles University: didactics of university teaching and overlaps with other disciplines]', presented at the Erasmus+ multiplier event *Odborný seminár Profesionálne vzdelávanie VŠ učiteľov na Slovensku a v Česku* [Seminar on professional education of university teachers in Slovakia and the Czech Republic], 25 October, Bratislava, Slovakia.

'Extending and reinforcing good practice in teacher development', (2016) *University of Economics in Bratislava*, available at https://euba.sk/en/science-and-research/news/1310-extending-and-reinforcing-good-practice-in-teacher-development, accessed 28 August 2019.

Kreber, C. and Brook P. (2001) 'Impact evaluation of educational development programmes', *International Journal for Academic Development* 6:2, pp. 96-108.

'Masaryk University strategic plan, 2016-2020', (2019) *Masaryk University*, available at https://www.muni.cz/media/docs/1127/mu_dz_2016-2020_Eng_web.pdf, accessed March 17.

'Mission, values and vision', (2019) *Masaryk University*, available at https://www.muni.cz/en/about-us/official-notice-board/mission-values-and-vision, accessed 17 March.

Pleschová, G. and McAlpine, L. (2016) 'Helping teachers to focus on learning and reflect on their teaching: What role does teaching context play?' Studies in Educational Evaluation 48: 1–9.

Pleschová, G. and Simon A. (eds.) (2018) *Early career academics' reflections on learning to teach in Central Europe*, London: SEDA, available: https://www.seda.ac.uk/Early-career-academics-reflections-on-learning-to-teach-in-Central-Europe, accessed 15 September 2019.

Roxå, T., Mårtensson, K. and Alveteg, M, (2011) 'Understanding and influencing teaching and learning cultures at university: a network approach', *Higher Education* 62:1, pp. 99-111.

Vanderziel, J.A., Sucháček, P. and Čejková, I. (2019) 'Center for Teaching Excellence: Origins and Future Potential', presented at the Erasmus+ multiplier event *Enhancing university teaching and learning in Central Europe. A conference*, 21 February, Brno, Czech Republic, available at https://qualityteaching.euba.sk/www_write/files/events/vanderziel_brno_21_feb_2019.pptx, accessed 3 September 2019.

By Mari Karm (University of Tartu) and Triinu Soomere (University of Tartu)

Supplement 8: Impact narrative for educational development activities at the University of Tartu

Prepared as part of the collaborative project *Extending and reinforcing good practice in teacher development*, 2016-1-SK01-KA203-022551

Output O4-a: A comparative study of two programs for teachers in higher education and their outcomes

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Co-funded by Erasmus+ program of the European Union

By Mari Karm (University of Tartu) and Triinu Soomere (University of Tartu)

Introduction

In the Tartu case, the impact comes from the cumulative effect of a variety of pedagogical development initiatives. However, the pedagogical course for doctoral students is very important as the starting point of educational development in Tartu. Both the doctoral students' and that of university teachers' pedagogical courses have had their role to play in changing of the university's teaching culture on different levels. Therefore, the impact of the pedagogical course should not be viewed separately but as intertwined with other academic development initiatives to support enhancement of teaching skills. The subsequent analysis is based on Kreber and Brook's (2011) six levels of impact, excepts for Level 5, student learning for which we do not have sufficient data to analyse.

Level 1: Participant satisfaction

The pedagogical course Learning and Teaching in Higher Education is a voluntary course for doctoral students at the University of Tartu. Course is offered two times per year, number or participants in each group is 20-25. Doctoral students who have completed the pedagogical course perceive its value as is demonstrated in the feedback they provide.

Since 2011 course participants complete an online university-wide feedback questionnaire. The student feedback questionnaire is voluntary, about two thirds of course participants have completed the questionnaire after finishing the course.

The final question in this questionnaire asks participants about their overall rating of the course? On a scale from 1 (poor) and 5 (excellent), the course's average rating was between 4.7 and 5 each year between 2011 and 2018.

Generally, course participants commented that the pedagogical course was considered useful and the course leaders 'practiced what they preached', responding positively to the fact that participants were taught using the same methods they were instructed to use. The also see other benefits to the course:

> 'Owing to the interactive approach used during the course, it was possible to get to know other doctoral students with different backgrounds. It was a good platform to share your experience and discuss problems related to teaching, learning and supervision.'
>
> 'It is a subject all doctoral students at the university should complete. A great teacher who also does what she says herself.'

Another question asks participants 'What would you say about the course to future students?'. As the pedagogical course is voluntary, it is very positive that course participants who have completed the questionnaire recommend other doctoral students to take this course in the future for a variety of reasons:

> 'Highly recommend! Opens the background of teaching and learning to those who have managed to slip through university studies without much conscious thinking.'
>
> 'Very useful subject to everyone who is motivated to obtain new knowledge about teaching or learning. At the same time, it requires quite a lot of independent thinking and analysis, and one should not expect to be successful by just showing up at the right time. On the contrary, it is necessary to always be ready to participate and experiment. It must be emphasised that in addition to the topics offered by the teacher, conversations happening during breaks add to the course and broaden horizons.'

> 'I definitely recommend taking this course to all students. Even if you are not planning to teach any subjects in the future, this course helped me to better understand the learning process, and that knowledge I can apply when I study myself.'
>
> 'I recommend the course. It is definitely a good subject for a beginner university teacher, practical micro-teaching adds a good opportunity to look at yourself objectively and get feedback to your teaching.'

As the course is an elective that is offered to doctoral students from all faculties in the university, positive feedback is important for the continuity of the course. When choosing their elective courses doctoral students can see feedback by earlier course participants, so good feedback functions as an incentive for other doctoral students to choose the course. Since there is no obligation for doctoral students to teach, there is no external pressure for selecting this particular elective. Therefore, it is important that feedback by participants remains positive, so that it would be recommended to other students who could potentially choose it. At the same time, as the course is an elective and participation is voluntary, it is likely that it is chosen by those PhD students who really need or are very interested in it, and the feedback is positive because the course corresponds to what they perceive they need or want.

Course participants highly value the practical nature of the course and, as show above, that there is a consistency between what is taught and how it is taught. Through the microteaching mini lessons participants have the opportunity to practice what is learnt in theory. The key principles of the course are learner-centredness and experiential learning. Course participants appreciate this very much. We find it important to show them that learner-centred teaching in university is possible and it resonates very with them.

Levels 2 and 3: Participants' beliefs about teaching and their teaching performance

Remmik and Karm (2013) studied the change of teaching conceptions of novice university teachers at the University of Tartu. The study revealed that novice university teachers' conceptions changed towards learning-centredness after completing the pedagogical courses including both the courses for doctoral students and university teachers. Thus, we can conclude that the courses positively impacted the participants' ideas about teaching. However, findings this study did not convince us that the participants change their teaching practice after completing the pedagogical course. When interviewing course participants, they talked about their teaching conceptions a lot but not all interviewees connected the declarative knowledge gained during the course to their teaching practice. What is more, novice university teachers experienced that, when they returned to their academic units after the pedagogical course, their pedagogical ideas and teaching approach were not always positively received. The ideas learnt during the pedagogical course seemed strange to colleagues in their respective disciplinary communities.

That was the reason we started the community of practice type of follow-up course called From Colleague to Colleague. Haamer et al. (2012) analysed the impact that this course had on the cohorts of participants and revealed that this kind of activity supports changes in teaching practice.

In 2016, a new study on impact of pedagogical course has been initiated in Tartu among groups of university teachers participating in a long-term pedagogical training (6 ECTS) course. Data was collected from the participants at the beginning of the course and again six months after the end of the course. Participants were asked to write answers to open questions about their planning of teaching, their teaching methods or activities, the assessment strategies and methods in their teaching practice, and how they understand teaching and learning. The texts were analysed with qualitative content analysis and discourse analysis.

Preliminary results (Karm et al 2018) show that the conceptions of teaching that concern teaching and the teaching methods used are richer in details at the end of the course rather than at the beginning of the course. Interviewees evaluated most highly the practical tasks that gave them experience about using different teaching methods. They also reported that reading articles about teaching influenced their thinking as teachers. Peer observations of teaching as a part of their pedagogical training was described as most influential in their everyday practice as teachers.

This suggests that participants moved from a change in teaching conception to the next level, i.e. changing their teaching practice. Partly, this is a result of participating in the foundational pedagogical courses and the subsequent colleague to colleague course. It is also important, however, that the context as such has changed and become more learner-centred since the last study in 2010-2012. Since data collection started in 2016 and remains in progress, we continue data-collection and data analysis in order to see if the change that we detected applies to all participants of the community of practice type of activities.

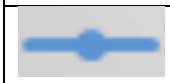
Level 4: Students' perception of staff's teaching performance

The university-wide teaching questionnaires collects answer electronically and students must provide feedback to at least 4 subjects by the end of the semester. They can freely choose which subjects they want to give feedback on. In a questionnaire, students answer nine questions both numerically and by adding verbal comments. Numerical ratings are presented in two systems. The summative grade for the course is provided on a 5-point scale. The answers questions about the personal aspects of their course experience are measured on a scale that ranges from -2 (worst) to +2 (best).

As demonstrated in figure 1 and table 1, there is a slight improvement both the overall feedback to the subject and in the individual aspects of teaching since 2014. This is feedback provided to all lecturers at the university and does not distinguish between teachers who have participated in pedagogical course and those who have not. Consequently, we interpret the change in student feedback as a sign of a change in teaching culture.

Figure 1. Overall student ratings to courses taught at the University of Tartu on a 5-poins scale.

Table 1. Students' feedback measured at the -2 to +2 range to the personal aspects of teaching in courses taught at the University of Tartu.

	Academic Year				
	2013/14	**2014/15**	**2015/16**	**2016/17**	**2017/18**
 The teacher's attitude was supportive of learning and open to students.	1.53	1.55	1.56	1.58	1.61
 The teacher taught the course masterfully (sparked interest, clear presentation, engaging, etc.)	1.32	1.34	1.36	1.38	1.42
 The materials given or recommended by the teacher were relevant in terms of their content, form and suitability.	1.47	1.48	1.50	1.52	1.55
 The teacher gave sufficient feedback about the results of my work in completing the course.	1.28	1.32	1.34	1.36	1.40
 Overall, how would you rate the course?	4.07	4.08	4.12	4.14	4.18

Level 6: Institutional culture

The new vice rector of academic affairs Aune Valk had already worked for the University of Tartu 10 years ago and has now returned to the university. She said in an interview that in these 10 years the learning-teaching culture at the university of Tartu has changed markedly. She found the change in and widening of professional development activities most noticeable. Valk also said that at leadership meetings and discussions the quality of teaching and learning is an important topic, which had not been the case 10 years ago. He added that 'If we discuss the quality of teaching and learning, then for me it is a positive surprise how much attention is paid to development of teaching. It is one of the major changes at the university in the last 10 years that I noticed as I came back to the university'.

Another manifestation of the change in the university culture is making teaching and learning, and not only research, a part of the university's explicit mission. In 2016, the document Good Practice of Teaching (2016) was created, which is the results of a bottom-up approach by university teachers (academic staff). The discussions about the good practice of teaching started in the scholarship community. The idea behind writing down the good practice of teaching was to create a conceptual basis for development of teaching. The discussions of the scholarship community spread to another group the From Colleague to Colleague learning community. Based on different discussions, thematic blocks were developed and further elaboration on those took place at a conference in 2016. The event was organised using the World Café method that was deemed effective for creating a collaborative dialogue around the idea of good practice of teaching in university. The results of the conference were collated. A working group, with the leadership of Vice Rector Mart Noorma, finalised the document. The document is valuable for its process of

compilation: many people were involved and different ideas about teaching were discussed in groups encompassing diverse perspectives. It is also important that later in the process of development of teaching (in various activities for teaching development) we can rely on these principles of Good Practice of Teaching, for example, when evaluating SoTL applications or in the guidelines for teaching portfolio.

Starting 2020 teaching quality and development of teaching skills will be taken into account in academics' evaluation process when applying for the new position or when continuing their work in the same position.

Placing high value on teaching is also reaching the formal documents guiding the development of the university. In 2019, discussions about the strategic plan for 2020-2025 have taken place at the University of Tartu. Next to research excellence, good quality teaching has emerged as an important topic in discussions regarding the new strategic plan of the University of Tartu. The current version of the new strategic plan states that the University of Tartu places equal value on research and teaching and that the university creates conditions for the continuous development of teaching skills of academics.

References

'Good practice of teaching', *University of Tartu*, available at https://www.ut.ee/sites/default/files/www_ut/ulikoolist/good_practice_of_teaching.pdf, accessed: 28 May 2019.

Haamer, A., Karm, M., Groccia, J. (2012) 'The impact of communities of practice on University teacher professional learning and professional identity', in J. Mikk, P. Luik and M. Veisson (eds.) *Lifelong learning and teacher development*, Frankfurt am Main, Berlin, Bern, Bruxelles, New York, Oxford, and Wien: Peter Lang Verlag, pp. 41-57.

Karm, M., Sarv, A., Niilo, A., Voolaid, E., Miliste, M. and Groccia, J. (2018) 'University teachers' approaches to teaching in the context of a pedagogical course', Paper presented at the *ISSOTL Conference*, 24-27 October 2018, Bergen, Norway.

Kreber, C., and Brook, P. (2001) 'Impact evaluation of educational development programmes. *International Journal for Academic Development* 6:2, pp. 96-108.

Remmik, M. and Karm, M. (2013) 'From teaching to guiding learning: novice university teachers' conceptions of teaching and learning', in: E. Saar and R. Mõttus (eds.) *Higher education at the crossroads: the case of Estonia*, Frankfurt am Main: Peter Lang Verlag, pp. 199-216.

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Supplement 9: Impact narrative for educational development activities at Lund University

Prepared as part of the collaborative project *Extending and reinforcing good practice in teacher development*, 2016-1-SK01-KA203-022551

Output O4-a: A comparative study of two programs for teachers in higher education and their outcomes

This version finalized on: 30 September 2019

Co-funded by Erasmus+ program of the European Union

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Introduction

In considering the impact of the course *Introduction to teaching and learning in higher education* at the Faculty of Engineering at Lund University (LTH), we have used Kreber and Brook's (2001) impact framework, which outlines six levels at which impact can occur as changes in (1) participants' perception/satisfaction with the program, (2) participants' beliefs about teaching and learning, (3) participants' teaching performance, (4) students' perception of staff's teaching performance, (5) students' learning and (6) the culture of the institution.

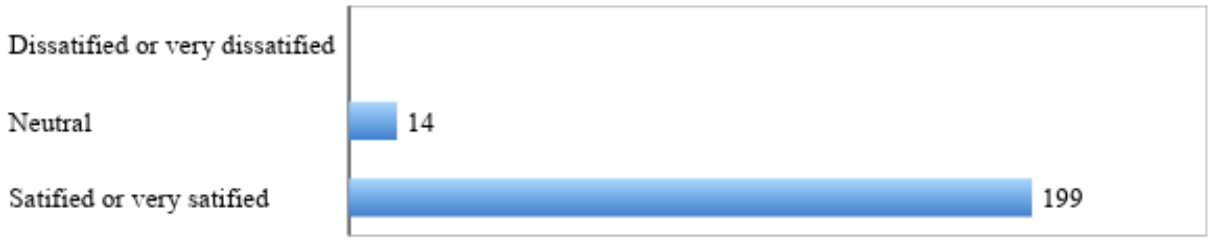
It is relatively simple to gather evidence for the lower levels of this model, but at higher levels impact begins to depend on a broader range of factors and thus becomes more difficult to observe directly. For example, although participants' experience of a pedagogical course is directly determined (level 1), the question of whether or not they change their teaching (level 3) and subsequently if the students experience change in teaching strategies (4) may depend on other aspects, such as the local teaching and learning regime within the participants' local working context or changes in student body, as well. Therefore, the impact of a pedagogical course becomes more diffuse at higher levels of the model. To trace the impact of a single pedagogical course all the way to the culture of an institution is complex and cannot be a straightforward task for any sort of evaluation of pedagogical training.

Level 1: Participants' perception

Introduction to Teaching and Learning in Higher Education is a mandatory course for all doctoral students at LTH and offered four times per year with 25 participants each time. On the final day of the course, participants complete a questionnaire that asks about their experience in the course.

Over the ten most recent cohorts of the course, 213 out of the 236 course graduates answered the question that ask them to indicate how satisfied they were with the course overall. The vast majority (93%) of the participants were satisfied with the course (figure 1). Most noticeably no course participant was dissatisfied with the course at any level. Thus, it is fair to claim that this is a sign of positive impact on level one in Kreber and Brooke's model.

Figure 1. Participants' overall assessment of the course from January 2016 to June 2018



N=213

Level 2: Participants' ideas about teaching

Andersson et al. (2013) studied the impact the course had on participants' conceptual understanding of teaching in one recent cohort of the course. Their inquiry revealed that all twenty-six participants subject to the study changed their conception of teaching towards a more learning-centred view. It is fair to claim that the course positively impacted the participants' ideas about teaching.

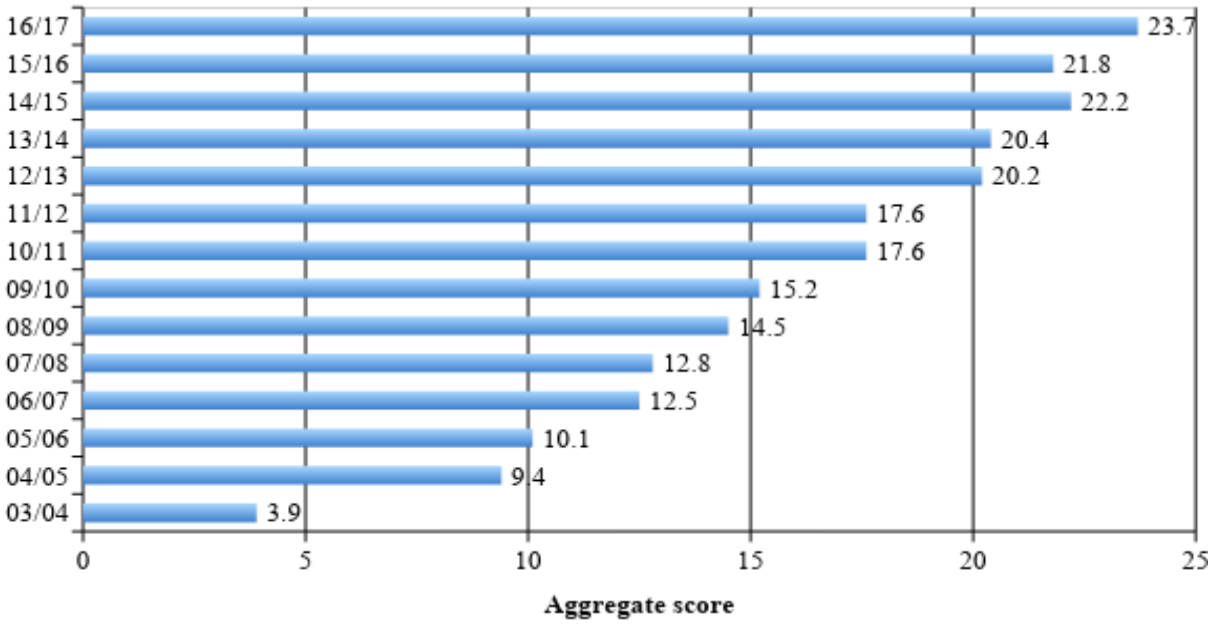
Levels 3 and 4: Teaching performance and students' perception of teaching

In order to say something about teaching behaviour and students' perception of teaching we need to widen our perspective. LTH offers many pedagogical courses to teachers and has done so for many years. In addition, there are other educational development interventions: a campus conference on teaching and learning that has run since 2003, a reward system for excellent teachers that has been in place since 2001, and a systematic course evaluation system that has been used since 2003.[1] It is likely that any attempt to detect impact from just Introduction to Teaching and Learning in Higher Education is unlikely to succeed. On the other hand, it is fair to consider evidence of impact on a more systemic level, looking at all educational development initiatives together.

The instrument that LTH uses for student course evaluations is the Course Experience Questionnaire (CEQ) (Ramsden 2005). Students answer each question on the CEQ using a five-point Likert-scale where 1 (totally disagree) is coded as -100 by the system and 5 (totally agree) is coded as +100, with the values in between distributed evenly across the scale. Aggregate results are plotted on an overall scale from -100 to +100. Since 2003, 247 224 completed questionnaires have been collected (approximately 17 568 per academic year). Arguably, if students' responses move closer to an aggregate score of +100 systematically over the years, then it is reasonable to claim that teachers at LTH have improved their teaching practice over time and that students have noticed this change.

The aggregate score in our analysis is a combination of the answers given in the CEQ to the six items that address teaching activities that promote a deep approach to learning, which are considered to indicate good teaching: (1) The teaching has motivated me to do my best, (2) During the course, I received many valuable comments on my achievements, (3) The teachers made a real effort to understand the problems and difficulties one might be having in this course, (4) The teaching staff normally gave me helpful feedback on the progress of my work, (5) My lecturers were extremely good at explaining things, and (6) The teachers on the course worked hard to make the subject interesting.

Figure 2. Aggregate results for the CEQ section on good teaching for all courses from 2003/2004 to 2016/2017.



[1] For details on these see Supplement 7 of the O4-a project outcomes.

As figure 2 demonstrates, 0ver a period of thirteen academic years, we see a steady and almost linear increase in the aggregate score on good teaching. Thus, to say that educational development interventions at LTH have had a positive effect on teachers' teaching behaviour and that students have perceived these changes. Although we cannot trace the specific impact of Introduction to Teaching and Learning in Higher Education in these results, the scope and reach of the course due to the facts that it is compulsory and has around a hundred participants per academic year make it reasonable to conclude that it has contributed to this positive trend. In addition to this, we cannot necessarily attribute the linear development over time solely to educational development interventions, but it is more than likely that they have contributed significantly to the change we can see.

Level 5: Student learning

It is incredibly difficult to trace changes in student learning from one specific pedagogical course. It has been done (Ho 2000; Ho et al. 2001) but mostly in highly controlled environments. Ho et al. (2001) studied one cohort of participants after they had completed a pedagogical course. Gibbs and Coffey (2004) made an attempt to do the same in an international study of effects from pedagogical courses within a group of institutions. They argue that effects on students' approaches to learning is detected. Since then many studies have tried to do the same, but the difficulty increases as the number of participants and students grows. Many factors influence students' learning, not only individual teachers' participation in professional development.

However, in our case, we are able to re-examine results from the CEQ. This questionnaire was constructed with the explicit intention of creating an instrument that can indicate whether courses in higher education institutions encourage a deep approach to learning among students (seeking personal meaning and understanding) in contrast to a surface approach to learning (instrumental, studying for the exam with less personal meaning). If we accept that a deep approach to learning is corresponds to better learning overall, then the steady increase in the aggregate score for good teaching since 2003 (figure 2) corresponds to an increase in a deep approach to learning among students, which indicates that student learning has improved. Educational development interventions at LTH (including the course described here) contribute to students taking a deeper approach to learning, which suggests the course helps to improve student learning.

Level 6: Learning culture

To be able to consider the impact of educational development on the culture of the institution, which is the highest level of impact formulated by Kreber and Brooke (2001), we need a perspective on culture. At LTH the explicit strategy for educational development is that teaching and learning is enhanced if the teachers have better and more frequent conversations about teaching and learning. Many interventions stimulate an attitude of inquiry consistent with the scholarship of teaching and learning (SoTL) (Roxå et al. 2008).

The strategy relates to a perspective where culture is constructed and maintained in interaction between people sharing the same contexts, in this case the same practice (Trowler 2008; Roxå and Mårtensson 2009; 2015). Thus, culture at LTH changes when teachers interact more and with an increased attitude of inquiry while considering teaching and student learning.

To achieve this, all educational development interventions include elements of SoTL: teachers write about teaching and learning, use educational references, and engage in systematic observation of student learning. Throughout this process, teachers in engineering produce written artefacts for other teachers in engineering. These artefacts, which number over six hundred at last count, are stored in a searchable database available to all employees at LTH.

It has been shown that the quality of these artefacts has improved over time, considering in particular teaching portfolios and contributions to the local campus conference on teaching and learning (Larsson et al. 2015). It has also been shown that teachers who, based on a peer assessment of their teaching portfolios and an interview, earn the designation Excellent Teaching Practitioner (Olsson & Roxå, 2013) refer to interactions with colleagues as a source of inspiration to a larger extent than teachers whose portfolios and interviews fail to earn the designation (Warfvinge et al. 2018). It is fair to say that these observations indicate that the course, being one of many educational development initiatives at LTH, contributes to a change in the teaching culture among teachers at LTH.

References

Ho, A.S.P. (2000) 'A conceptual change approach to staff development: a model for programme design', *International Journal of Academic Development*, 5:1, pp. 30-41.

Ho, A.S.P., Watkins, D. and Kelly, M. (2001) 'The conceptual change approach to improving teaching and learning: an evaluation of a Hong Kong staff development programme', *Higher Education*, 42, pp. 143-169.

Andersson, R., Ahlberg, A., Diehl, A. and Price, L. (2013) 'Investigating the effects of academic development on novice teachers' conceptions of teaching in HE', Paper presented at the *41st SEFI Conference*, 16-20 September, Leuven, Belgium.

Gibbs, G., and 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* 5:1, pp. 87-100.

Kreber, C., and Brook, P. (2001) 'Impact evaluation of educational development programmes. *International Journal for Academic Development* 6:2, pp. 96-108.

Larsson, M., Anderberg, E., and Olsson, T. (2015) 'Researching the transformation in the scholarship of teaching and learning through teaching portfolios and conference papers: a reflection at the institutional level', in S. Booth and L. Woollacott (eds.) *The scholarship of teaching and learning in higher education: on its constitution and transformative potential*, Stellenbosch: Sun Press.

Olsson, T. and Roxå, T. (2013) 'Assessing and rewarding excellent academic teachers for the benefit of an organization', *European Journal of Higher Education* 3:1, pp. 40-61.

Ramsden, P. (2005) *Learning to teach in higher education* (2nd ed.), London: RoutledgeFalmer.

Roxå, T. and Mårtensson, K. (2009) 'Significant conversations and significant networks – exploring the backstage of the teaching arena', *Studies in Higher Education* 34:5, pp. 547-559.

Roxå, T. and 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, pp. 193-205.

Roxå, T., Olsson, T. and Mårtenson, K. (2008) 'Appropriate use of theory in the scholarship of teaching and learning as a strategy for institutional development', *Arts and Humanities in Higher Education* 7:3, pp. 276-294.

Trowler, P. (2008) *Cultures and change in higher education. Theories and practice*, Gordonsville: Palgrave Macmillan.

Warfvinge, P., Roxå, T., and Löfgreen, J. (2018) 'What influences teachers to develop their pedagogical practice?', Paper presented at the *LTHs 10:e Pedagogiska Inspirationskonferens*, 6 December, Lund, Sweden.