

Professional development as a collaborative endeavour of networked learning in higher educational settings: Dissemination of knowledge among teacher training professionals

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Abstract

University teachers continue to strive to take up mobile and blended learning technologies in their teaching practices and universities continue to support this work through professional development courses for university teachers. At Mid Sweden University, two projects have recently been carried out with the objective to develop higher education practices supported by mobile and blended learning technologies in teaching in practice. Professional development for university teachers was expected take place using an iterative design comprising five features: participating in a competence development course, planning trials, conducting trials, evaluating teaching and participating in a pedagogical seminar. In this paper, the preliminary results of the final interviews with 12 teacher educators will be presented. The interviews were carried out to explore beliefs regarding changes in teaching practices, following the completion of teacher professional development project. The results showed that the teacher educators in this study experienced change in the use of mobile and blended learning in their teaching through dialogue, collaboration, dissemination and networked learning. Three themes were identified. The first theme was collaboration. Here, the teacher educators expressed beliefs which could be related to collaboration for learning to use mobile and blended learning technologies in their teaching, supporting conditions for networked learning. This involved working and planning new technologies in new courses together. In the second theme, sharing is caring, the teachers in the study expressed helping each other out and supporting each other in the work to learn and use new technologies in their teaching. Support through pep talks and taking on learning new technologies as a group was one example of gaining knowledge about new technologies. In the third and final theme, the teacher educators' expressed beliefs regarding dissemination as a way to share knowledge and experiences. Beliefs expressed here included learning through seeing what others were working with and exchanging knowledge. The teacher educators' in this study also expressed the need for continued learning through collaboration and dissemination, as networked learning in their community of practice. How universities continue to provide professional development to support teachers' continued work together in communities of practice through networked learning will be of importance. These efforts in professional development will provide possibilities to push forward change in teachers' use of mobile and blended learning in their teaching practices.

Keywords

blended learning, collaborative learning, community of practice, higher education, mobile learning, teacher professional development

Introduction

As mobile and blended learning technologies continue to permeate teaching and learning in higher education, teachers continue to strive to integrate these for tools in their teaching in through collaborative endeavours. In this process, professional development is a key factor (Crompton & Traxler, 2018). Teachers need time to test and explore teaching using the technologies related to mobile and blended learning in which campus-based and

online teaching strategies and tools are combined. This may be especially true for teacher educators. Professional development is of importance in these efforts (Rienties, Brouwer, & Lygo-Baker, 2013). According to Guskey (2000), for professional development to be successful, there needs to be an impact on teachers' knowledge, their skills and their beliefs. When moving to an online educational setting, the online teacher is a good teacher as well as a teacher who holds a set of technical skills which involves "resilience, innovativeness, and perseverance typical of all pioneers in an unfamiliar terrain" (Anderson, 2008, p. 360).

Professional development for university teachers can be related to professional development for the individual and the organization, taking on both informal and formal aspects of learning to teach in mobile and blended learning educational settings. Formal learning can be related to organized professional development activities. This includes participation in seminars, courses, workshops and other training activities which are arranged and carried out by organizations (Noe, Wilk, Mullen, Wanek, 2014). Informal learning related to professional development may pertain to a large wide of activities. These activities may take place in work in practice in work situations which occur in daily practice and which are based on engagement. All of these activities are of importance if universities are to create opportunities for dialogue, discussion and debate and conditions for networked learning. Here, networked learning is defined as learning activities which connect teachers as well as the learning community (Goodyear, Banks, Hodgson & McConnell, 2004) and the contexts in which the teachers participate (Rydberg & Sinclair, 2016). As of late a shift can also be seen in the interest in collaborative teacher teams (Gast, Schildkamp & van der Veen, 2017) and professional development through professional conversations (Schuck, Aubusson & Buchanan, 2008). For university teachers, participating in these activities can be seen as learning through participating in a community of practice (Wenger, 1998) of everyday collaborative work-based settings. Moreover, professional development is often supported by social and technological networks involving both collaboration and individual development, which can be expressed in terms of creating conditions for networked learning. If such development embraces the opportunities to apply and reflect on knowledge in practice together with colleagues it could lead to new conditions for networked learning and changes in practice longer term (Holmes & Sime, 2014).

Recently, there have been two different professional development projects recently at the teacher education, Mid Sweden University. Both projects had the objective of developing higher education practices supported by blended and mobile learning. In the first project, seven courses were included (Jaldemark & Lindberg, 2014). The second project, reported in this study, built on the first project and ended in late spring 2017. It included six higher education programs, of which five of these programs were teacher education programs aimed at different school levels, and the sixth was a behavioural science program. Professional development was expected take place using an iterative design comprising five features: participating in a competence development course, planning trials, conducting trials, evaluating teaching and participating in a pedagogical seminar.

Aim and research question

This paper aims to explore and identify teacher educators' beliefs regarding professional development related to the uptake and use of mobile and blended learning in their teaching and the conditions for networked learning. The following research question is posted: How can teacher educators' beliefs about changing practices using mobile and blended learning technologies in their teaching be identified, described and analysed as conditions for networked learning? In order to explore this research question, 12 teacher educators, 7 women and 5 men, were interviewed using semi-structured interviews to gather information regarding their beliefs on changing practices related to the use of mobile and blended learning technologies in their teaching. The analysis of the interviews can be described as open-ended, involving a systematic process for developing codes and themes (Bryman, 2012). This paper presents the preliminary findings of these interviews and adds on to previous research regarding teacher educators' beliefs of changing practices and professional development in the specific project context at Mid Sweden University (Jaldemark & Randevåg, 2016).

Results

In the interviews with the teachers, three main themes were identified as preliminary results: *collaboration*, *sharing is caring*, and *dissemination*. In each theme, the overall group of teachers is presented through a limited number of quotations to illustrate the beliefs expressed. The teachers are referred to as Teacher and number, (T1-T6).

Collaboration

In this theme, teachers expressed beliefs which referred to professional development as a *collaboration*. This took place through continual dialogue in which learning is always constant and present in both formal and

informal situations. This involved collaborating with colleagues who led the way: “I really want to learn and I want to see the possibilities ... but there are so many possibilities and I feel that there is a continual work at the department ... with people who are active and push” (T2). Other forms of ongoing collaboration with colleagues appeared to be linked to pedagogical decisions regarding the balance between pedagogy and technology. Here, colleagues were seen as resources in the work group, whether in formal teacher group meetings or informal discussions:

It is the continual conversation, and that is because we live with this distance education and there are always questions that come up, and how can we solve this another way, and we look back at ourselves and think... if I want to do this, how can I do it during a distance week, and what to I gain and how much resources should I put into it, and if it takes a lot of resources is there a digital solution, and then we can do it during a campus week... and every time we discuss courses this comes up, even around the coffee table. (T6)

Here, collaboration can be described as a continual learning process in work in practice. The dialogue and discussions take place in different networks of learning, informal and formal, as well as on different organizational levels.

Sharing is caring

In the preliminary results, the second theme which evolved was sharing is caring. This theme involved professional development and learning with the support and encouragement of colleagues. Here, teachers spoke of how they supported each other in their work in taking in new technologies: “Somewhere along the line, this means that we discuss with each other, we give each other pep talks, encourage each other and support each other” (T5). This work also appeared to involve collaborating and taking on new technology skills together through support in a group: “There are a few of us who have said that we want to ask for help so that we can try it out [teaching in active learning classrooms] ... And it doesn’t have to be a big thing ... before the courses start ... when we have the possibility” (T3). Another belief that can be referred to the theme sharing is caring, is the work in teacher groups help each other with input and inspiration, as well as reminding each other of previous challenges and the solutions they found through collaboration: “We see this when we sit in our teacher teams, work groups and so on ... remember what we did then?” (T6). In summary, the sharing is caring theme comprised teachers collaboratively helping and supporting each other to take on new technological challenges in their teaching.

Dissemination

In the preliminary results, the third theme which was identified is dissemination. This theme involved disseminating the knowledge and skills which teachers had gained individually and in their work teams. In this theme, teachers expressed the need to gain insight and access skills and experiences of others, through dissemination: “The most particular quality-driving measure I think would be to invest more time in these things [collaboration and design ... or being able to see what other people are doing” (T1). Another teacher expressed information that is disseminated regarding work in practice through informal networks, as well as expressing the need for extended formal networks for disseminating information:

I miss the pedagogical conversations, if that is what you can call it. In my experience, a lot is ventilated between people who have the same interests, you get a little input, a few ideas, but there has never been the time or the room for discussing this more in detail. You can see, you hear that things are happening, there are lots of really skilled colleagues who do lots in their courses, but you never really have the opportunity to learn about it because everyone is so focused on their own thing. (T5)

Another teacher describes the dissemination in which formal structures can be seen as a platform for pedagogical discussion, dissemination and course development: “I think that we have done this, I try to, or we try to involve all of the teachers, the whole teacher team in all of the planning. They should feel that they are aware of what everyone else is doing, and give them a chance to be involved” (T4). In summary, in this theme, teachers’ beliefs regarding professional development and change appear to focus on the need for time to discussion. Sharing experiences appears to take place both in informal and formal networks. It also appears that there is a need for further discussion in formal settings to encourage networked learning and course development.

Discussion

In this paper the aim was to identify and describe teachers' beliefs on changing practices in higher education using mobile and blended learning and the conditions for networked learning. The preliminary results show that the themes collaboration, sharing is caring and dissemination of skills and experiences appear to be of importance to these teacher educators. The teacher educators in this study see possibilities for professional development in both informal and formal dialogue and networks within the department. It also appears that the teachers strive for change (Anderson, 2008). By creating a learning community for teachers' sharing and caring for each other in the endeavour to implement mobile and blended learning technologies in their day to day practice through collaboration (Gast, Schildkamp & van der Veen, 2017), these endeavours can be understood as creating conditions for networked learning. At the same time, the teachers express the need for time to plan, design and discuss these issues in their teacher teams and the experiences and skills gained disseminated to a greater extent both in work groups and on the department level, i. e. a community of practice (Wenger, 1998).

The findings in this study are important for how universities continue to provide professional development to support teachers' continued work together in communities of practice through networked learning. These endeavours will be of importance to push forward change in teachers' use of mobile and blended learning in their teaching practices in higher education settings.

Future research will include continued analysis of the data materials presented in this paper. Further, these findings and the findings in a parallel project carried out at Mid Sweden University will be combined and analysed. Further insights into how teacher educators' beliefs regarding the continued work together in communities of practice through networked learning will be studied, as change in the use of mobile and blended learning and the conditions for networked learning in their teaching practices.

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