Theoretical underpinnings in the planning of the in-service training

The rapid technological development and the growth of online learning, present new challenges for higher education teachers and institutions. Web 2.0 tools create new opportunities for teachers and students to communicate, collaborate and contribute by different modalities. The need for teachers to harness this potential in order to be able to respond to the changing needs and expectations of their students make in-service training of higher education online teachers a priority. What is often overlooked in in-service initiatives however, is that teachers have varying degrees of technological competence and pedagogical competence. They also teach different kinds of content to students with different pre-existing knowledge, etc.

This poster presents the implementation and outcomes of two simultaneous in-service training initiatives at the University of Gävle, Sweden. The initiatives were aimed at developing online teachers’ ability to successfully integrate ICT in their teaching. When planning this initiative we deliberately wanted to avoid technocentrism and a narrow focus on standards or competencies. Instead we were inspired by Mishra & Koehler’s theoretical framework TPACK (Technological Pedagogical Content Knowledge) which recognises that developing the ability to successfully integrate ICT as a tool for learning means understanding the reciprocal relationship between technological knowledge, pedagogical knowledge and content knowledge (Mishra & Koehler 1986; 1987). Mishra & Koehler has built on Shulman’s (1986) pedagogical content knowledge (PCK) to create a conceptual framework that also includes technological knowledge and the ability to successfully integrate this with their pedagogical knowledge and content knowledge. In other words, a teacher that possesses TPACK knows how to successfully integrate ICT in their practice to create an added pedagogical value.

Accepting this means that any in-service initiative that aims to help teachers develop their technological knowledge must consider, and help teachers’ become aware of, how the development of such technological development will both depend on and affect their pedagogical practices and their choice and representations of content. This in turn means that a mere focus on digital tools and technological skills is not a valid approach.

Earlier research stresses the importance for the teaching community to find ways of exchanging experiences of teaching with technology and contribute in building a knowledge base to support teachers when making design
decisions (Baran, Correia & Thompson 2011). There is also research supporting the notion that purposeful use of ICT (i.e. TPACK) cannot be taught as a separate skill but must be actively practiced in an authentic context (Fransson & Holmberg 2012). Hence we decided to offer a demand based in-service training where participation was voluntary and two separate but complementary initiatives were started simultaneously. One initiative focused on identifying individual teachers’ perceived need of technological/ICT support and training in the university’s Learning Management System (LMS). These needs were then addressed in individual face to face talks and workshops between teachers and ICT-support personnel where the teachers’ content knowledge and pedagogical knowledge was also reflected on alongside their technological knowledge.

The other parallel initiative provided online teachers with an opportunity to meet and exchange experiences about pedagogical ICT-use at lunch seminars. Each lunch seminar had a theme and an opening speaker. The themes were suggested by the online teachers themselves and the opening speakers were all employees at the University College of Gävle, most often an online teacher who shared his or her experiences of for instance a certain functionality in the LMS when teaching a certain content, or experiences from a certain course where technology was used to achieve certain pedagogical effects

Context and implementation

The University College of Gävle (HiG) has approximately 14 500 students and about 50 study programs. Today, HiG is one of Sweden's leading higher education institutions when it comes to distance education. Around 40% of all students are distance students. Roughly 300 teachers (out of 450) teach online courses. Certain distance education programs and courses have a few meetings on Campus, others are taught exclusively online. Learning Center (LC) is a support and development unit within the library at the University of Gävle. The personnel at LC have extensive ICT skills and many of them also have a teaching background. LC was responsible for the planning, implementation and evaluation of the initiatives described in this poster.

As stated above the first of the two parallel initiatives meant identifying and addressing individual teachers’ perceived need of technological/ICT support and training in the university’s Learning Management System (LMS) with regard to their individual teaching background and knowledge (content knowledge and pedagogical knowledge) and teaching situation (course to be taught).

The target group was approximately 300 teachers at three different faculties. The time period was 5 months. Every teacher was asked to fill in a self-assessment survey. This survey mainly covered different features and functionalities in the Learning Management System (LMS) and web conference tool used by the university. Based on the needs and wishes expressed by the teachers, personnel from LC with a solid knowledge of the functionality of the LMS and web conference tool scheduled 1-3 individual meetings where every teacher who so wished could perform supervised training and ask questions, test ideas, etc.

The second initiative aimed to provide teachers with an arena to meet and exchange experiences about pedagogical ICT-use. A survey was administered to all teachers at HiG listing a number of suggested themes for a number of upcoming lunch seminars. Teachers were asked to indicate their interest to participate in any of the seminars but also to suggest their own lunch seminar themes. The LC employees who had coordinated initiative one also contacted online teachers they had met to ask about their willingness to act as opening speakers at one of the lunch seminars. Having received feedback on the survey and the individual contacts mentioned a definite list of seminar themes and dates was emailed to every teacher at HiG. To create an additional incentive and to make sure as many people as possible would have the time to participate if they wanted to, we also announced that a light lunch would be provided free of charge to every teacher who signed up to attend the lunch seminars.

Lessons learned

The TPACK framework proved useful as a conceptual tool for thinking about what successful ICT integration could mean and to help teachers question the common conception that learning technological skills is enough for online teachers.

Overall, the combination of the two initiatives was considered successful by participating teachers and organizers. Almost 50% of the teachers participated in the first initiative (voluntary individual fact to face support primarily in use of LMS and web conference tool). About 17% of the teachers attended the lunch seminars on at least one
occasion. The lunch seminar format was appreciated both because of its relevance to the teachers and because of the format which allowed participation despite the often busy schedules of many teachers.

However, the first focus of the large majority of questions, desired support and lunch seminars concerned technological skills and only a limited number of teachers desired support in designing courses and/or trying new ways of teaching and working with ICT. There was also limited interest in learning about the web 2.0 features of the LMS (e.g. blogs and wikis). This indicates that additional initiatives are needed to further raise the awareness level about what successful ICT integration mean. That it is not only a matter of expanding teachers’ technological knowledge but that pedagogical beliefs and practices, as well as choices and representations of content, must be considered simultaneously.

The chosen method of individual face to face support was much appreciated and considered effective as a means of learning how to successfully integrate ICT. However, as stated above, other findings indicate that this integration would probably have to be further developed in order for teachers’ to develop TPACK.

References