The focus of TWG3 is to inform discussion about how those responsible for teacher professional development (TPD) may ensure that teachers are better prepared for the challenges of using ICT in educational settings. In EDUsummIT 2013, we aim to advance the discussion about 1) the development of a shared vision about the role of ICT in education (with a focus on TPD), 2) the potential of school-based communities of practice and professional learning networks in TPD for building ICT integration capability, and 3) the importance of research-based knowledge for effective professional development.

Introduction

The EDUsummIT 2011 call for action proposed that teachers should experience learning with information and communication technologies (ICT) for themselves as part of a career-long continuum of professional learning. It suggested that teacher professional development (TPD) should be based on a vision of education, and of the role of ICT, shared by all stakeholders, including teachers, school leaders, policy-makers, parents and community.

The theme of EDUsummIT 2013 is research-informed strategies to address educational challenges in a digitally networked world. The main issues to be addressed by TWG 3 on this Summit are: 1) development of a shared vision regarding the role of ICT in education (with a focus on TPD and its roles in shaping it), 2) identifying the potential of communities of practice and professional learning networks in TPD for building ICT integration capability, and 3) addressing the importance of research-based knowledge for effective TPD.

Background

A paper based on the work of TWG 3 at EDUsummiIT 2011 (Twining, Raffaghelli, Albion, & Knezek, 2013) includes an update of key literature on TPD, with a focus on TPD aimed at supporting the application of ICT for the transformation of learning and teaching across all disciplines. It noted that quality teachers are the most important factor influencing student learning (Rivkin, Hanushek, & Kain, 2005) and that TPD should go beyond encouraging ICT adoption for common tasks to a focus on improved learning and teaching, thereby acknowledging that effective teaching requires the effective use of ICT (Ertmer & Ottenbreit-Leftwich, 2010) and is built upon integration of knowledge across the domains of content, technology and pedagogy (TPACK) (Mishra & Koehler, 2006).
It is critically important to engage all stakeholders in developing a shared vision for ICT in education, recognizing that, as ICT evolves, education will need to respond with new models, roles and practices that integrate new technologies. Accordingly, TPD must be seen as forming a career-long continuum, and policy should provide for minimum entitlements and requirements for ongoing TPD, from pre-service throughout in-service training. Moreover, effective TPD requires changes on multiple levels of educational systems (macro or political-systemic, meso or institutional, and micro or individual) and ICT integration should be seen as an opportunity for introducing new goals, practices, structures and roles supporting these changes (Tondeur et al., 2012; Twining et al., 2013). Furthermore, teachers’ beliefs have been identified as hindering ICT integration in teaching and learning; hence, it is essential to focus on the human factor, not only in terms of skills and competencies, but also with regards to self-efficacy and beliefs regarding ICT integration (Prestridge, 2012).

A review of the literature published between 2009 and 2011 found that the best learning for teachers occurs in school and is facilitated by a positive school culture (Postholm, 2012). Liu (2012) reported that a school-based community for building ICT integration capability benefited from the support of the principal but experienced some issues with teachers’ anxiety about class observations. A longitudinal study by Sun et al. (2013) reported that participation in TPD increased teachers’ provision of help to colleagues, and that changes in instructional practice diffused through the network of helping. They also reported the positive influence of school leaders, which is consistent with previous work in which Webber (2010) reported that school leaders recognize the need to access PD for technology leadership and to provide technology TPD for teachers in their schools.

These studies recognize the potential of TPD that is tailored to local conditions and takes advantage of mutual support among teachers. Kopcha (2012) noted the benefits of TPD that was situated in the local context and responded to needs by transitioning over time from mentoring by an outside expert to teacher-led communities of practice (CoPs). Matching TPD to local needs has also been managed using a design-based approach that was successful in promoting generative teacher knowledge and ICT integration (O’Hara, Pritchard, Huang, & Pella, 2013). Beyond the local school, Holmes (2013) reported on the success of TPD facilitated through an online learning community that crossed regional and national boundaries. Communities of practice have also been used to provide PD for school leaders (Bouchamma & Michaud, 2013).

Other approaches to TPD that have been reported include sustained coaching to develop TPACK (Ciampa & Gallagher, 2013), informal TPD using common social networks (Coutinho & Lisbôa, 2013), and an informal mentoring network established by a novice teacher using Twitter (Smith Risser, 2013). Ciampa and Gallagher (2013) also highlighted the important role played by the principal in supporting their coaching model.

In EDUsummIT 2011 TWG 3 emphasized that TPD should also address pedagogy rather than ICT alone. Ertmer and Ottenbreit-Leftwich, (2013) have argued for a shift from technology integration to technology-enabled learning so that ICT integration is not an isolated goal but the means by which students engage in meaningful learning activities. This emphasis is supported by research that compared TPD focused on ICT with TPD that linked ICT with problem-based learning and found greater gains for learners in the condition that included pedagogy (Walker et al., 2012).
Issues/unresolved questions/concerns

TWG3 at EDUSummit 2011 identified several obstacles to effective TPD, such as a lack of consistent vision for education; poor matching of TPD to needs of teachers; failure to engage all stakeholders in decisions; and lack of harmony among context, policy, practice, and research. Consensus developed around a particular concern that research-based knowledge for effective professional development is not adequately disseminated in a manner that impacts policy or practice. Proceeding from this base and considering the recent research noted above, we propose that TWG3 at EDUSummit 2013 initiate its discussions around the following:

1) Despite progress in some areas, a major challenge remains to engage all stakeholders in developing a shared vision about the role of ICT in education with a focus on TPD in order to realize this vision.

2) School-based communities of practice and professional learning networks have been effective in TPD for building ICT integration capability. The related challenge is to engage more teachers in these forms of TPD.

3) The gap between educational research and the practice of teachers in classrooms has been noted previously. There is a need for educational research that is more closely connected to, and informs, the practice of teachers and vice versa.

References and recommended additional reading


