

Chapter 47

Teacher Training and Digital Competence: A Pedagogical Recommendation

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ABSTRACT

Teacher training in all fields should include advanced digital competence for teachers and their teaching, not concentrating only on ICT user skills of teachers. These issues should be part of both initial teacher training and in-service training. The training should consider aspects of using ICT both as a learning tool within subject teaching and as a tool used by learners for their homework and learning-related actions outside school sceneries. Recently, digital competence has become a key conception in debates on the kind of skills and understanding learners need in the Knowledge Society. The wide meaning of digital competence offers the necessary framework (i.e. the knowledge, skills and attitudes) for working, living and learning in the knowledge society. In this paper the focus is on how pedagogically the skill area can be addressed and what tools there are available to help the teachers and students.

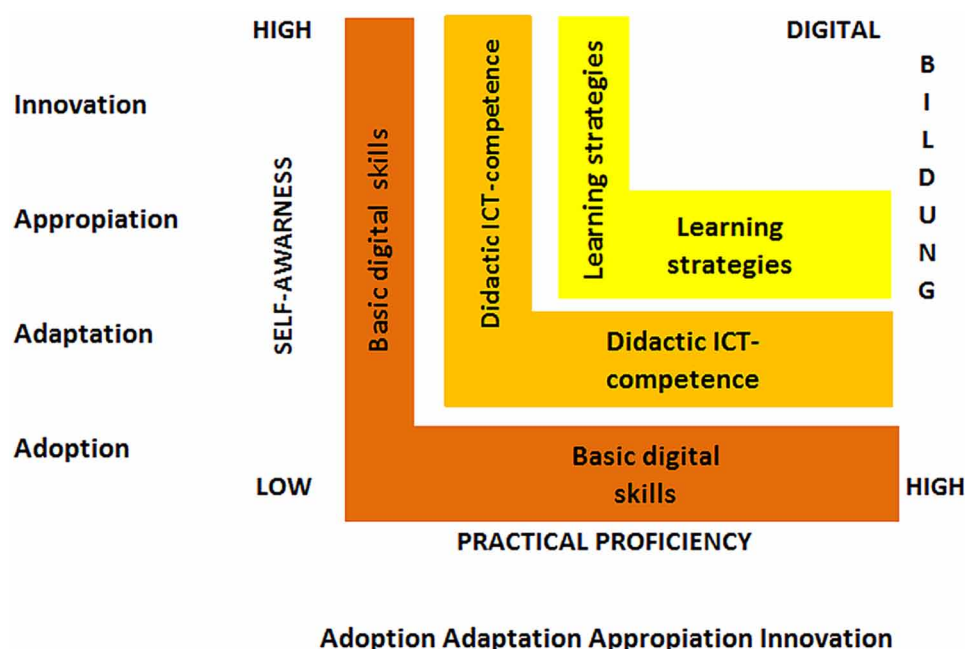
1. THEORETICAL CONTEXT

Technology is everywhere, if we like it or not. And nearly all future jobs require us to understand it. To reply to this, governments are including computing in national curricula for students of all ages. In the UK already every primary school teacher has to teach computing concepts and in many other countries more and more of us will be required to teach computing or at least integrate computing concepts, ideas and processes into our teaching. Digital skills are already an essential requirement for young people to succeed in an increasingly digitized society. Not only are these skills demanded for an increasing number of jobs, they also are a requirement and a right of citizens, if they are to be functional in today's

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society. Schools and teachers therefore need support to work with their students to develop a wide range of digital skills that ensure young people leaving school have the skills required by the labor market and by an increasingly digitized society. The goal therefore is to guide teachers in how to develop a range of digital skills and to introduce them to the tools and resources that are available to them. Teachers should be able to plan lessons that focus on a range of digital skills, make use of innovative tools to assist their own and the students' work in this area. Many national and international studies show that teachers still only to a small level integrate ICT in their own classroom teaching (Bauer & Kenton, 2005), and the National Center for Education Statistics (NCES) found that only half of the teachers who had access to PC and Internet used this in their teaching (Judson, 2006). The absence of essential digital literacy among teachers seems to be one of the main reason for this situation. Across many countries, a lot of important contributions have been made to the definition of digital literacy in recent years. Lanham (1995), Gilster (1997), Tyner (1998), Knobel (1999), Lankshear and Knobel (2003), and Buckingham (2003, 2006) in particular have made contributions to the concepts of computer literacy, media literacy, and digital literacy. Other important contributions have focused more specifically on teachers' ICT competence. A statement shared by the different positions about digital literacy and ICT competence is that teachers' digital competence is more complex than digital literacy in other occupations and among average citizens (Hooper & Rieber, 1995). This requires an awareness of this complexity, and the way in which teachers carry out and experience the pedagogical use of ICT will very often depend on their high or low digital competence. What is digital competence in school contexts? We know from teacher education that ICT is often perceived only as a tool that can be handled with elementary ICT skills. We suggest a definition that describes the digital competence of teachers': "Digital competence is the individual teacher proficiency in using ICT in school with good pedagogical judgement and his/her awareness of its implications for learning strategies and the digital Bildung of students". This definition is closed to a visual model of teachers' digital competence (Figure 1).

Figure 1. Adapted from "Teachers' digital competence" (Krumsvik, 2007; Krumsvik, 2012)



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