Teachers’ Decisions to Use ICT in Classroom Practice: An Investigation Based on Decomposed Theory of Planned Behavior

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ABSTRACT

This paper reports on a pilot study investigating Greek secondary education teachers’ perceptions and attitudes towards current use of ICT as a learning tool in their classroom practice and the possible factors that influence their decisions to integrate ICT in their instruction. The survey presented has adopted the Decomposed Theory of Planned Behavior (DTPB) with certain modifications a) to assess teachers’ beliefs of the potential of ICT to support classroom learning activities, and b) to better understand teachers’ decisions to adopt ICT as learning tool in classroom practice. A Likert-type scale was constructed to investigate the DTPB variables and other factors related to the use of ICT in the classroom. Results indicated that although teachers were aware of the benefits of ICT to promote students’ learning they do not integrate ICT as a learning tool in their regular, everyday teaching practices. Primary factors determining the use of ICT in classroom practice relate to facilitating conditions in the schools and teachers’ self-efficacy. On the other hand, perceived usefulness of ICT, perceived ease of use, compatibility and normative beliefs seem to have minor impact on teachers’ actual usage of ICT in classroom settings.

Keywords: Decomposed Theory of Planned Behavior, Information and Communication Technology, Learning Tools, Teachers, Teachers’ Beliefs

INTRODUCTION

Information and Communication Technologies (ICT) have produced rapid changes in society by fundamentally transforming the way people communicate, have access to information and entertainment, and doing business, administration, research etc. In addition, ICT are perceived to be inherent to the educational reform efforts necessary for the 21st century society, since they have changed the key aspects of the nature of knowledge and the way we access it. The tremendous development and diffusion of new generation (Web 2.0) technologies is expected to exert a significant impact on instruction and learning (Dede, 2008; McLoughlin & Lee, 2010) by:

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• Promoting students’ motivation, engagement, communication, self-directed and collaborative learning
• Offering better access to information, and shared content and working resources
• Helping students to think and communicate creatively, and learning to take place beyond the walls of the traditional classroom environment.

In recent years, technology integration has been recognized as the key lever for improving instruction and learning, and has been regarded among the first priorities in educational policy, fund planning, and curriculum development in many educational systems in the EU area and around the globe (Becta, 2008; EC, 2007; OECD, 2006; 2009; OFSTED, 2011; P21CS, 2011). At the same time, governments launched major initiatives and directed considerable funding to build ICT infrastructures in the schools and prepare teachers to effectively use ICT for educational purposes.

However, the intention to transform teaching and learning and achieve educational reform, through the integration of ICT in classroom settings, has not so far been sufficiently applied. Despite educational policy huge efforts and directives (ICT infrastructure in the schools, teacher preparation initiatives etc.), ICT failed to induce a major impact in the schools compared to other disciplines in our modern society (administration, business, labor, research, etc.). Existing literature shows that the application of ICT in educational settings is rather peripheral acting, in most cases, as an isolated ‘add on’ effect to regular teacher-centered classroom work. It remains a common practice, for most teachers, to use ICT primarily for low-level formal tasks (e.g., content delivery or getting information from Web resources) and for administrative purposes (developing lesson plans and student worksheets, accessing course materials etc.) rather than as a learning tool to support students’ active learning (Russel et al., 2003; Waite, 2004; Levin & Wadmany, 2008; Jimoyiannis & Komis, 2007; Tondeur et al., 2007; 2008; Holden et al., 2008; Wikan & Molster, 2011). It seems that teachers’ attitudes and educational intentions to make effective use of ICT in everyday classroom practice still remain a barrier for the integration of ICT in the schools.

In this study, we focus on the determinants of teachers’ adoption of ICT in classroom practice in Greek secondary schools. We assumed that teachers’ intention to use ICT as a learning tool in the classroom is related to the concepts of attitudes, perceived behavioral control and subjective norm towards using ICT as learning tool in classroom practice. Based on the predicted interrelations of the Decomposed Theory of Planned Behavior (DTPB) we constructed a modified scale to assess teachers’ beliefs of the potential of ICT to support classroom learning activities and to understand their decisions to use ICT as learning tool in classroom practice. The results presented here indicate that although teachers were aware of the benefits of ICT to promote students’ learning they did not use ICT as a learning tool in their regular teaching practices. Primary factors inhibiting the use of ICT in classroom practice relate to facilitating conditions in the schools and teachers’ self-efficacy. On the other hand, perceived usefulness of ICT, perceived ease of use, compatibility and subjective norms seem to have minor impact on teachers’ actual usage of ICT in classroom settings.

LITERATURE REVIEW

Teachers’ Adoption of ICT in School Practice

In the last decade, educational policy directives have articulated clear and unambiguous statements to promote the adoption of ICT in the schools and integrate new instructional strategies to support students’ learning (Becta, 2008; EC, 2007; OFSTED, 2011; P21CS, 2011). Despite that, the applications of ICT in classroom settings is rather peripheral acting, in most cases, as an ‘add on’ effect to regular class work.
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