

Vocational School Students' Information and Communication Technology Self-Efficacy Beliefs and the Factors Affecting their Use of Such a Technology

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ABSTRACT

The purpose of vocational schools (VSs) in Turkey, which offer two-year degree courses, is to provide the students who have completed a high school programme successfully with practical introductory experience in skilled trades such as computing, electronics, mechanics, carpentry, construction, field crops, and so on. Those who complete a two-year VS degree successfully are also entitled to take the national exam to access the associate degrees so that they can study further two years and get a four year degree diploma instead of a two-year one. In this study, vocational school (VS) students' (i.e., age 17/18 and above) information and communication technology (ICT) self-efficacy beliefs and their level in use of certain common programmes at one of the colleges in the eastern part of Turkey were investigated in the spring of 2012. The study examined the VS students' (a) demographic background, (b) their ICT self-efficacy beliefs and (c) their ICT-using level in certain common programs. The VS students at four different departments (i.e., two-year degree courses) who were full-time were given the questionnaires to complete. 272 (N=272) participants completed them. The study was both quantitative and qualitative. The quantitative results were analysed with SPSS (i.e., descriptive statistics, ANOVA, Independent Samples Test). The qualitative data were analysed with examining the participants' responses gathered from the open-ended questions and focussing on the shared themes among the responses. The results revealed that the participants were ICT literate and users. They had positive ICT self-efficacy beliefs and their level in certain common programs was good. There were also statistical differences between their (a) ICT self-efficacy beliefs and (b) ICT level in certain common programs in terms of the length of ICT-use, the frequency of ICT-use, the place of ICT-access, and gender. The findings were consistent with the models and theories of technology engagement (i.e., theory of technology acceptance, the theory of reasoned action, the decomposed theory of planned behaviour, and the unified theory of acceptance and use of technology), which recognise facilitating or inhibiting conditions. The implications are (1) to provide (free) full-access to ICT in terms of technology availability and efficient resources, (2) to provide free efficient ICT courses and (3) to integrate ICT into teaching/learning.

Keywords: *College Education, Facilitating or Inhibiting Conditions, ICT Self-Efficacy Beliefs, Information and Communication Technology (ICT), Turkey, Vocational School (VS) Students*

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1. INTRODUCTION

Information and Communication Technology (ICT) can be in a wide range of varied forms such as computer programs, the Internet, e-mail, instant messaging, computer projectors, scanners, webcam, interactive whiteboards or any type of digital learning resources. To this end, different studies on different aspects of ICT such as students' ICT self-efficacy (Askar & Umay, 2001), the use of digital resources (López-Pérez, Pérez-López, & Argente-Linares, 2013; Maher, Phelps, Urane & Lee, 2012; Chen, Lambert & Guidry, 2010), the use of interactive whiteboards (Turel & Johnson, 2012), the difficulties teaching staff face with in using ICT (Turel, 2013; Buchanan, Sainter & Saunders, 2013; Seferoglu, 2007; Usluel & Seferoglu, 2004), the design of digital materials (Turel, 2014; Turel & McKenna, 2013; Turel, 2012) and human-ICT interaction and health (Yenilmez & Seferoglu, 2013; Bilge 2012; Altun & Cakan, 2006; Keser, 2005; Odabasi, 2005; Ozden, Erturk & Sanli, 2004) and so on have been conducted so far.

ICT has become integral to teaching and learning since the use of computers, the Internet and digital resources in and out of the classrooms (Park, Lee & Cheong, 2008). While ICT has been used at colleges in Turkey in the last two decades (Turel, 2013; Sirakaya & Seferoglu, 2013), some other countries began to use ICT five decades ago (Romeo, 2006). To use ICT more widely and efficiently, great investment and effort were made in some countries (Romeo, Lloyd & Downes, 2012; Balasubramanian et al., 2009; Becta, 2009). Even though the use, efficient use and the frequent use of ICT at college level can show significant differences not only among different countries (Maher et al., 2012; Yeung, Lim, Tay, Lam-Chiang, & Hui, 2012; Kregor, Breslin & Fountain, 2012; Kennedy et al., 2009), but also among different institutions in the same country, it is not wrong to claim that today ICT is used at all institutions in developed and developing countries. Even more and more institutions are using ICT to develop and deliver course materials

(Hong & Lai, 2011). In fact, institutions and students do not have a choice whether to use ICT or not. They have to use ICT in order to be competitive in this digital age. Not only do today's students, who are in general digitally fluent and competitive, use ICT, but they also expect ICT to be used more widely in teaching/learning (Duncan-Howell 2012). Accordingly, it is assumed that teaching should respond to such learning demands and differences to accommodate the digital-literate, wise and efficient learning style preferences (Duncan-Howell, 2012; Prensky, 2001). Although the use of ICT at college level by students is important, the use of the right digital resources and their efficient use are more vital. ICT has to be used selectively, efficiently and effectively (Yanpar Yelken, 2011). The successful use of ICT at college level is fully in the hands of institutions, teaching staff and students. If (a) colleges provide necessary structural factors (i.e., provision of the right hardware, efficient and pertinent digital materials and needed technical support), (b) tutors integrate ICT effectively and (c) students use ICT efficiently for the expected objectives, then it can be claimed that ICT is used in true-sense. Efficient use of ICT can lead to ICT self-efficacy, which features in perceived ICT usefulness and its perceived ease of use (Davis, 1993). According to Bandura (1997a, 1997b), who is a psychologist as well as a key theorist, self-efficacy is people's own believes in their ability to succeed in specific situations and people with high self-efficacy are more likely to be successful. These are some of the factors that define whether students prefer to engage with various forms of ICT or not (Ajzen & Fishbein, 1980).

Though college students are expected to be digitally fluent and competitive, it is not really known to what extent the VS students in the "eastern part of the country" has been taking the advantage of the benefits that ICT can offer. Thus, the research questions are:

1. What is the college students' background in ICT like?

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