Analysing the Relationship between ICT Experience and Attitude toward E-Learning

Comparing the Teacher and Student Perspectives in Turkey

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Abstract. This paper analyses the relationship between the experience of using different ICT and attitudes towards e-learning. We have conducted two surveys with teachers and students from the academic institutions associated with the subject of electricity in Turkey. Both surveys have been built on our conceptual models of readiness for e-learning. 280 and 483 valid responses from teachers and students have been collected, respectively. Overall, the findings indicate that the more experiences the teachers and students have of using different ICT the more positive their attitudes towards e-learning and that e-learning should be integrated into campus-based education and training.

Keywords: E-learning, Experience, Higher education, Electricity, Survey.

1 Introduction and Background

Several barriers hinder the integration of e-learning into higher education institutions (HEIs). To address this concern in the context of HEIs associated with the subject of electricity in Turkey, we have conducted two surveys with representative samples of teachers and students from these HEIs in 2010 and 2011, respectively. Specifically, we employed questionnaires and semi-structured interviews to measure the two target groups' readiness for e-learning and to investigate how to implement e-learning in these HEIs. Results of the surveys have been published ([1] [2] [3] [4]). However, no systematic comparison between the responses of the two groups has been made. It is intriguing to know if there is any gap between the target groups, which may hamper the implementation of e-learning. With the questionnaires two major aspects were investigated: First, both students and teachers were asked with several close-ended items to evaluate their usage of different ICT and their attitudes towards e-learning. Second, they were asked with an open-ended item to elaborate their past or current experiences with e-learning, if any, and attitudes towards e-learning. In summary, the main goal of this paper is to analyse teachers' and students' self-reported evaluations to find out whether they are different significantly from each other in different aspects pertaining to e-learning.

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2 Theoretical Background

Grounded in the meticulous reviews of the relevant literature, we have developed a conceptual model on teachers' (without the component "traditional skills") and students' readiness for e-learning in HEIs (Fig. 1). The notion of 'readiness for e-learning' can be defined as the ability of an individual or organization to benefit from e-learning [5].

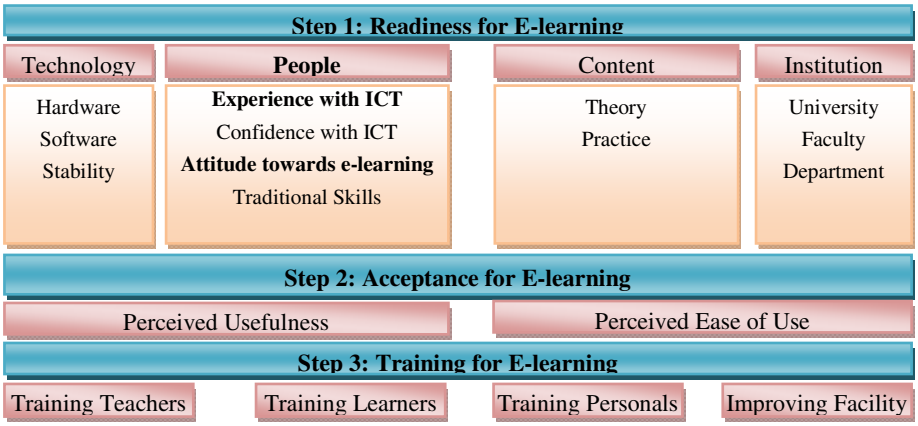

Fig. 1. Model on readiness for e-learning

As shown in Fig. 1, there are many factors affecting the ability of teachers or students to take the advantage of e-learning in their own working or studying context. As we aim to find out whether individuals tend to embrace or ostracize e-learning when they have more or less experiences of using ICT, in this paper we focus on two attributes of the factor *People*, namely *Experience with ICT* and *Attitude towards e-learning*.

Attitudes towards E-learning. Attitudes of individuals towards e-learning are emphasised as an important aspect of predicting and improving e-learning usage [6]. Hence, it is deemed relevant to find out potential stakeholders' attitudes towards e-learning *before* implementing it. Different researchers (e.g. [7]) measure people's attitudes with different approaches with Technology Acceptance Model (TAM) [8] being a common one. TAM is used to measure two constructs: *perceived usefulness* and *ease of use*, which denote the degree to which people believe using a system would be useful and free of effort, respectively. We also adopted TAM to measure teachers' and students' beliefs whether e-learning would be free of effort and useful for their respective tasks. However, rather than using the TAM, based on the literature (for details see [1] [3]), we have identified five sub-factors to measure attitudes for e-learning: *Knowledge, ICT competencies, Time, Feeling of readiness*, and *Thinking about others*.

Experience with ICT. Earlier research studies indicate that the usage of a system is significantly affected by previous experiences of other systems (e.g. [9]). Based on the related literature (for details see [1] [3]), we identified six sub-factors to study