Full length article

Vocational college students' acceptance of web-based summative listening comprehension test in an EFL course

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ABSTRACT

There is a substantial increase in the utilization of web-based assessment procedures to assist teaching and learning processes in higher education institutions. Despite their benefits, institutions use them to a limited extent due to a number of factors influencing both instructors' and students' behaviors. This study examines students' acceptance of a web-based summative listening test administered in the 2014 −2015 academic year within an 'English as a Foreign Language' course at a two-year post-secondary military school in Turkey. The participants consisted of 602 military students. As a model, Computer Based Assessment Acceptance Model based on Technology Acceptance Model was adopted in order to analyze the participants' perceptions on a web-based summative listening comprehension test. The data were collected via an online questionnaire. A structural equation modeling analysis was utilized to analyze the relationships among factors. The general results showed that perceived ease of use and perceived playfulness had a direct influence on the participants' behavioral intentions to use web-based tests. In other words, web-based tests are expected to be used if they are easy to use and playful enough.

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1. Introduction

Seeing that students' frequent use of computers and the Internet is increasing rapidly, web-based testing (WBT) is also becoming a prevalent system as an alternative to traditional assessment practices in all educational settings around the world. WBT is related to the conceptualization and administration of assessments as a sophisticated way of using web technologies (Cigdem & Oncu, 2015) with the aim of expanding educational assessments in universities, schools or other industry. WBT's becoming widespread resides in the fact that an increasing number of faculty members have started to realize the convenience of creating, implementing, and managing assessment as parts of learning management systems (Llamas-Nistal, Fernández-Iglesias, González-Tato, & Mikic-Fonte, 2013). WBT is seen as a noteworthy method for instructors, especially regarding high-stake tests, because it aims to optimize the goals and techniques of teaching and testing in shorter times (Pino-Silva, 2008) and the delivery or administration of the assessment is not supposed to be at a fixed time or place (Cigdem & Oncu, 2015; Jeong, 2014).

There have been numerous advantages of WBT for both test-developers and test-takers such as flexibility of time and place; enhanced resource use; immediate and real-time feedback; high interaction with test-takers; quick results and real-time score reports; automated grading and reporting; easier data management; cost reduction; more productive managing, organizing, and deploying of exams; time-saving evaluation of learners' strengths and weaknesses; and learners' self-evaluation (Abedi, 2014; Bull & McKenna, 2004; Chou, Moslehpour, & Huyen, 2014; Cigdem & Tan, 2014; Llamas-Nistal et al. 2013; Morris, 2008; Terzis, Moridis, & Economides, 2013; Zakrzewski & Steven, 2000). Along with such advantages, an effective WBT system is required to provide authentic assessment activities and meaningful feedback as well as to support multidimensional perspectives (Gikandi, Morrow, & Davis, 2011).

As test developers and test takers are being immersed in WBT systems, a greater number of educational researchers tend to work on the acceptance of WBT systems with the purpose of defining the variables that might explain the acceptance issue. Users' perceived acceptance of a technology or behavioral intentions to use a technology have been studied and described by many researchers previously as in the Theory of Reasoned Action (TRA) (Ajzen &

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Fishein, 1980); the Theory of Planned Behavior (TPB) (Ajzen, 1991); the Technology Acceptance Model (TAM) (Davis, Bagozzi, & Warshaw, 1989); the Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh, Morris, Davis, & Davis, 2003); and the Computer Based Assessment Acceptance Model (CBAAM) (Terzis & Economides, 2011). Considering the scope of the current research, the CBAAM was adopted and studied with the aim of determining the students' intentions to use a WBT system in the case of a summative assessment of Listening Comprehension in English.

2. Literature review

As the researchers have been driven to examine the factors that affect user's perceptions on the adoption and acceptance of WBT systems, there has been a considerable amount of literature portraying the application of the CBAAM in various educational contexts. To exemplify, Dermo (2009) surveyed 130 undergraduate students participating in an online (formative/summative) assessment system during the 2007–2008 academic year and found that the reliability, security, validity, and accessibility of the system were accepted by the participants coming from different academic programs like management, informatics and engineering, life sciences, social sciences and education, and therefore learning was promoted among them. As another example, Terzis and Economides (2011) worked on the perceptions of introductory informatics course students on the acceptance of WBT. Their results indicated that perceived ease of use and perceived playfulness had a direct effect on the use of computer-based assessments, whereas perceived usefulness had only an indirect effect. In Sorensen's (2013) survey on students' perceptions about e-assessments in a college chemistry course, the participants thought that e-assessment facilitated their learning. With that study, more frequent implementations of e-assessment in other courses was also suggested. In a study conducted with military students at a Mathematics course, it was seen that students having computers and the Internet at home as well as prior web-based exam experiences were more optimistic about the computer-based assessments than the other students (Cigdem & Tan, 2014). In another survey done with military students, Cigdem and Oncu (2015) investigated perceptions on WBT in a computer networks course and found that the contents of the questions significantly affected perceived usefulness and that perceived usefulness had a great influence on users' behavioral intentions.

All those attempts reveal that an increasing number of educational settings adopt or use WBT systems to deliver and manage their assessment procedures more efficiently and more conveniently. Since language testing is one of those settings, this study investigates the factors that are likely to influence learners' intentions to use WBT systems in the assessment of their listening comprehension. Even though WBT systems are thought to be useful in the realm of language testing, whether such systems are preferred over paper-pencil assessment procedures is not clear enough (Pino-Silva, 2008). Therefore, the current study is thought to be an important step to look into the perceptions of the students on WBT systems when assessing a fundamental skill of language education, which is listening comprehension.

3. Significance of the study

Turkish educational system is trying to raise generations who can speak at least one foreign language, which is frequently English, to be able to internationalize its institutions and citizens, and thus promote language teaching at all levels of education, particularly in higher education. Having graduates who can understand and speak English is one of the primary policies of many higher education institutions. This fact makes language teaching and testing in higher education a difficult and demanding task. Although teaching the skills of reading and writing are managed to some extent in current implementations, there is still a limited competence in teaching and testing of listening and speaking skills. An important attempt is thought to carry out a computer assisted system to expand teaching and testing of such skills to be able to make it more practical and widespread. From this point forth, this study will be a good basis for the upcoming value of teaching and testing of listening comprehension through technology in higher education. Although the major contribution of the study was to look into the variables influencing the students' intentions to use a WBT system, this study aimed to contribute to the field through an attempt to implement a WBT system within the context of a foreign language course, in particular for an underestimated sub-skill, which is Listening Comprehension. Various forms of WBT systems were adopted previously in various content areas; yet, such studies were limited in number and scope for language teaching contexts. Apart from this, the current research setting, which is a unique post-secondary higher education institution among its types, adds to the significance of the study.

4. Research model and hypotheses

Computer Based Assessment Acceptance Model (CBAAM) was proposed by Terzis and Economides (2011) on the basis of previous acceptance models such as TAM, TPB and UTAUT as well as with the inclusion of additional variables in order to describe behavioral intention to use a WBT system. Eight variables were included within the model: perceived usefulness, perceived ease of use, computer self-efficacy, social influence, facilitating conditions, perceived playfulness, content, and goal expectancy. On the whole, *Perceived Usefulness* and *Perceived Ease of Use* were adopted from the TAM (Davis, 1989); *Computer Self Efficacy* was adopted from Social Cognitive Theory (Compeau & Higgins, 1995); *Perceived Playfulness* was adopted from an extended TAM version by Moon and Kim (2001); and *Facilitating Conditions* and *Social Influence* were adopted from the UTAUT (Venkatesh et al., 2003). Apart from those, two more variables, *Goal Expectancy*, which is rooted in Self-Management of Learning (Wang, Wu, & Wang, 2009) and *Content* were introduced by Terzis and Economides (2011) to the model.

As illustrated in Fig. 1, the CBAAM suggests that users' intentions to use a WBT system is directly linked to perceived ease of use, perceived playfulness, perceived usefulness, and content of web based test. Apart from those links, perceived ease of use is defined by computer self-efficacy and facilitating conditions; whereas perceived playfulness is defined by perceived usefulness, goal expectancy, and content of web based test. On the other hand, perceived usefulness is also influenced by social influence, goal expectancy, and content of web-based test.

4.1. Perceived playfulness (PP)

Moon and Kim (2001) offered Perceived Playfulness (PP) in the TAM, as a key belief constructed through an individual's personal experience with a system, Perceived Playfulness (PP) is defined as "the pleasure the individual feels objectively when committing a particular behavior or carrying out a particular activity". PP, as a significant variable, is attributed to have a positive impact on behavioral intention to accept and use the Internet or a WBT system (Moon & Kim, 2001; Terzis & Economides, 2011) and determined by the aspects of concentration, curiosity, and enjoyment (Terzis & Economides, 2011). In this framework, it is about the arousal of an individual's enjoyment, cognitive curiosity, and concentration