World Journal on Educational Technology

Vol 7, Issue 2, (2015) 99-106

www.awer-center/wjet

Turkish teachers' and students' perceptions towards computer assisted testing in comparison with Spanish teachers' and students' perceptions

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Suggested Citation:
Berber, A., & Laborda, J., G. (2015). Turkish teachers' nd students' perceptions towards computer assisted testing in comparison with Spanish teachers' and students' perceptions. *World Journal on Educational Technology. 7*(2), 99-106.

Received May 05, 2015; revised June 17, 2015; accepted July 05, 2015
Selection and peer review under responsibility of Prof. Dr. Steven M. Ross, John hopkins University.

Abstract

There are different opinions about using technology in assessment field of education regarding computer assisted assessments. People have some concerns such as its application, reliability and so on. It seems that those concerns may decrease with the developing technology in the following years since computer-based testing programs are gradually getting better in terms of reliability and utility. This research aims to determine Turkish teachers' and students' perceptions towards computer assisted testing comparing the results with Spanish students' and teachers' perceptions. In this study, testing and assessment are used interchangeably even though some researchers accept these terms separately. The result of this study is crucial for educators in Turkey because computer-assisted assessment is being tried to be applied in Turkish schools. It is crucial to be aware of educators and students' perceptions towards it.

Keywords: computer assisted testing, Spanish, Turkish, teachers, students.

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1. Introduction

In the field of education, students' progress has always been checked in order to make important decisions. Different assessment types such as pen-and-paper exams, performance-based types have been used to find the best way to assess students. Thus, there have been an array of assessment types, and the question of the best assessment type is ongoing and needs to be answered.

Assessing students has always concerned students, teachers and even parents. Their perceptions towards assessment affect both the education system and notions of success. Traditional assessments have not been seen to be sufficient in terms of revealing students' progress in terms of time, endeavour and cost. These shortcomings of traditional assessment seem to be compensated by the developing technology.

People begin to born into technology are so-called 'digital natives'. Therefore, people tend to use technology in every part of their lives, which leads schools to use the new technology in education in order to meet students' needs and keep up with developments. Some schools have started to use computer-assisted assessments to the greatest extent possible.

There are different opinions about using technology in the assessment field of education regarding computer-assisted assessments. People have concerns such as its application, reliability and so on. It seems that those concerns may decrease with the development of technology in the coming years since computer-based testing programs are gradually getting better in terms of reliability and utility.

This research aims to determine Turkish teachers' and students' perceptions towards computer-assisted testing in comparison with the results of Spanish students' and teachers' perceptions. In this study, testing and assessment are used interchangeably even though some researchers accept these terms separately. The result of this study is crucial for educators in Turkey because the implementation of computer-assisted assessment is underway in Turkish schools. It is crucial to be aware of educators and students' perceptions towards it.

2. Literature Review

Computer assisted testing can be defined as using computer technology in the field of assessment (Pathan, 2012) despite the lack of consensus of its definition and terminology (Sim, Holifield & Brown, 2004). It has been developed in order to meet the need of assessing numerous students within short time periods (Jamil, 2012).

Computer assisted testing has advantages and challenges as do other assessment types. According to Pathan (2012), computer technology was used in assessment in 1935, with the purpose of reducing the cost for scoring and labor in the United States of America. Blazer (2010) claims that question types in computer-assisted testing are interactive and authentic compared to the ones in other types of assessment. It is claimed that higher-level thinking skills cannot be tested (Paterson, 2002 as cited in Sim, Holifield & Brown, 2004), which is crucial and requires development in assessments. On the contrary, higher-level thinking skills can be tested by using new technologies according to other research (Cox & Clark, 1998; Reid, 2002 as cited in Sim, Holifield & Brown, 2004). Another accepted advantage is that questions types can be individualized depending on students' ability levels (Blazer, 2010). For instance, students with disabilities can be assessed regarding their level without requiring excessive preparation. Quick results lead to quality feedback on time, which shapes the instruction of the course (Vandal, 2010; Kikis-Papadakis & Kollias, 2009; Kyllonen, 2009; van Lent, 2009; Puhan, Vollenweider, Latshang, Steurer, & Steurer-Stey, 2007; Gamire & Pearson, 2006; Paek, 2005; Bennett, 2003 as cited in Blazer, 2010).

There are disadvantages or challenges in computer-assisted testing despite its numerous advantages. There is a risk of losing all the progress made in the test because of technology related breakdowns (Vandal, 2010; Bridgeman, 2009; Rabinowitz & Brandt, 2001 as cited in Blazer, 2010),

which does not occur in pen and paper exams. Nevertheless, the development in technology seems to be reducing these problems (Yurdabakan & Uzunkavak, 2012). Some people may not have as frequent access to computers, or the internet as the others, which creates inequality among the test-takers (Sapriati & Zuhairi, 2010).

Students have positive attitudes towards computer-assisted testing regardless of its disadvantages according to a research (Millet, Jaouen, Borrani, & Candau, 2002; Ogilvie, Speck, Lett, & Fleming, 1999 as cited in Sapriati & Zuhaiti, 2010). Furthermore, it has been claimed that there is no significant difference in attitudes in terms of gender as long as tests are game-based and open (Terzis & Economides, 2011 as cited in Yurdabakan & Uzunkavak, 2012). When teachers are considered, they seem to be cautious in using computer assisted testing because of their lack of practice with computers (Usun, 2007). According to other research, a considerable amount of teachers are not willing to use computer-assisted testing even though they suppose that technology is a good strategy for instruction (Akbaba & Kurubacak, 1998 as cited in Usun, 2007).

3. Research Method

This research aims to explore Turkish teachers' and students' perceptions towards computer assisted testing and compare the results with Spanish students' and teachers' perceptions. It was conducted in Istanbul, Turkey.

3.1. Subjects

A total of 150 teachers and students have participated in this research. Of the 100 teachers (60 female, 40 male), 70 were recent graduates from Istanbul University which is a state university providing courses related to technology and internet in English language teaching, 18 were graduates of Yeditepe University which is a private one providing new technologies in classes, 12 were graduates of Marmara University which is also a state university with less emphasis on technology compared to the other two universities. Of the 50 students (34 male, 16 female), 30 were from the 4^{th} grade of Istanbul University, 20 were from 4^{th} grade of Marmara University. All participants have computers and internet access. They were not required to mention their names in the study; however, they were requested to state some basic information about themselves such as their school, age and gender.

3.2. The Test Instrument and Method

A quantitative methodology was chosen to do this research. The participants were given a 5- point Likert-type scale questionnaire which consisted of 10 statements designed to elicit perceptions towards computer assisted testing. The questionnaire was distributed in paper format (Appendix 1). They were asked to rate each statement on a 5 point scale, ranging from strongly agree to strongly disagree. The obtained questionnaire results will be calculated using percentage.

3.3. Expected Outcomes

When previous research is taken into consideration, numerous Turkish teachers and students have displayed a positive attitude towards computer-assisted testing. However, schools in Turkey have not been seen as sufficiently qualified to apply computer-assisted testing due to its cost. This research is expected to find out whether there is has been a change in teachers' and students' attitudes towards it regarding developments in Turkish schools. For instance, the Turkish government have distributed smart boards and tablets to many schools in Istanbul, which is an outstanding investment for technology.

The results will be compared with Spanish teachers' and students' attitudes in order to see if there is a difference in perceptions towards computer-assisted testing between Turkish and Spanish teachers and students. This study might offer some reasons to explain the similarities and differences in Turkish and Spanish teachers and students' perceptions.

3.4. Limitations

All the participants were from Istanbul, which is the biggest and most developed city in Turkey. Their perceptions might show a difference if they were from other cities in Turkey.

The comparison between Turkish and Spanish teachers and students' perceptions towards computer assisted testing might be misleading since this study takes place in 2015 whereas other articles about Spanish teachers' and students' perceptions were conducted in previous years. This means that there might be changes in people's perceptions.

Most of the participants were from Istanbul University in which the professors use technology in their courses. For instance, second life is one of the most common virtual environments that the professors use to teach lessons.

4. Results and Discussion

Computer assisted testing has been used for many years in many countries; however, Turkey has been trying to adapt this technology in recent years. 95% of newly graduated teachers support the idea of using computers in assessment according to the results of this research. Moreover, school principles in Antalya also supports using technology in schools according to a research conducted by Akbaba (2001). Thus, it can be concluded that not only new teachers from Istanbul, but also principles, who are teachers as well, from other cities have positive perceptions towards computers in assessment. However, Usun (2007) claimed that teacher training is not sufficiently developed in Turkey even though computer and instructional technologies and material development are compulsory at universities. Thus, it can be concluded that having a positive attitude is not enough to apply computer-assisted testing in Turkey.

65% of students are in favour of using computers in assessment; however, 35% of them have concerns about errors relating to the computer program which will be used. According to the research done by Garcia Laborda, Magal Royo and Bakieva (2010), Spanish students found computer-based exams useful, which is similar to Turkish students' perception towards it. Participants in both areas of research mentioned that they were frequently using ICT in their daily lives. This might explain the similar opinions among Spanish and Turkish students. Another research finding shows that Spanish undergraduate students felt unsecure while doing the exam via internet and considered pen and paper exams safer (De-Siqueira, Peris-Fajarnes, Gimenez & Magal-Royo, 2009). This result is also similar to the research done with Turkish students since they mention their concerns about errors related to computer program.

There was no significant difference in perceptions towards computer-assisted testing between males and females regardless of their profession. This result parallels the results in literature (Yurdabakan & Uzunkavak, 2012).

95% of the participants agree on the benefit of using computer-assisted testing for disabled students. However, there are some challenges associated with computer-assisted testing for students with disabilities. It is claimed that new kinds of test formats might be challenging for the ones with visual impairments (Thurlow, Lazarus, Albus & Hodgson, 2010). They also mention the possibility of problems with using keyboards for the ones with poor fine motor skills.

5. Conclusions and Future Implications

This study shows that Turkish teachers and students have a positive perception towards computer-assisted testing regardless of their gender and profession. However, there are some concerns about the safety of technology since computers or the internet might break down during the exam.

There are some schools in the east of Turkey which do not even have chairs in the classrooms. This can be accepted as proof that not every student has access to internet and computers. This situation raises a question mark in minds. Is the application of computer-assisted testing in Turkish schools more important than providing the basic conditions for classrooms all over Turkey?

Computer-assisted testing can be used for distance education since it has some benefits such as flexible schedule, providing an environment that students can get a second diploma during undergraduate education (Baran, Kilic, Bakar Corez & Cagiltay, 2010). Yet there are many students who do not have computers at home in Turkey, which is an obstacle to the application of computer-assisted testing in distance education (Baran, Kilic, Bakar Corez & Cagiltay, 2010).

In conclusion, Turkey needs to invest more on computer-assisted testing to provide the basic conditions to implement it. There seems to be no objection against it among teachers and students as long as their concerns are alleviated.

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APPENDIX 1

QUESTIONNAIRE

This questionnaire aims to find out Turkish teachers and students' perceptions towards computer assisted testing. There is no right or wrong answer in this scale. Please, mark the circle that represents your stance toward each item in the scale.

Gender: .....

Occupation: .....

Age: .....

	Strongly Disagree	**Disagree**	**Don't Know**	**Agree**	**Strongly Agree**
Computers should be used in assessment.	○	○	○	○	○
Computers can be used to facilitate learning for students with disabilities.	○	○	○	○	○
Pen and paper exams are safer than computer assisted exams.	○	○	○	○	○
I believe that Turkey is not developed to apply computer assisted testing in schools.	○	○	○	○	○
Computer assisted tests cannot assess higher-level thinking skills.	○	○	○	○	○
I believe that teachers	○	○	○	○	○

are not adequate in using technology.					
Computer assisted testing is more reliable than pen and paper exams.	⬭	⬭	⬭	⬭	⬭
I have internet access and a computer at home.	⬭	⬭	⬭	⬭	⬭
I believe that technology facilitates learning.	⬭	⬭	⬭	⬭	⬭
Using the internet in education is a waste of time.	⬭	⬭	⬭	⬭	⬭

Thank you for your contribution.

I hereby give my consent to use my information in this questionnaire for academic research purposes only.