

The Use of Web-Based Tests in an English Classroom: EFL Students' Perceptions

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Abstract

One of the practical applications of technology integration in the educational field is a web-based test. Since students need to be involved in the classroom assessment decision, knowing their perceptions toward the use of evaluation media is deemed important. Thus, this study was aimed to identify the students' perceptions on the use of web-based tests in an English class and to examine the problems experienced by students when using them in the classrooms. One hundred fourteen high school students participated in this study. This study utilized a survey which consisted of both open and close ended questions. A google form-based questionnaire was used to collect the data from the selected participants. The data were analyzed by using descriptive statistical analysis. The result of this study indicated that the students had positive perceptions of the use of web-based tests. However, they experienced some problems during the implementation of the web-based tests. The problems include the mobile device breakdown, lack of security, unfamiliarity, internet connection issue, server failure, browser incompatibility, mobile device unavailability, mobile device incompatibility, and time limitation. The study also found that the most frequent problem experienced by students was the server failure problem. Some pedagogical implications of this study were discussed.

Keywords: Classroom Assessments; Students' Perceptions; Survey Research; Technological Problems; Web-Based Tests

INTRODUCTION

Considering technology development in industrial era 4.0, educators or teachers have been searching for innovative approaches to the integration of technology tools that could meet both teachers' and students' demands for a more effective teaching and learning process. One of the practical applications of technology integration in the educational field is a Web-Based Test.

A web-based test is normally made and written over the internet (Roever, 2001). In other words, web-based tests refer to the term of website that is created to conduct an assessment. With the existence of a web-based test, a teacher is more convenient to create the test, conduct it, score it, and do other things related to assessment and online tests. Furthermore, it can also help to create a paperless

classroom (Gillispie, 2014). Moreover, a web-based test is a convincing alternative to paper-based tests (Omur & Unver, 2008).

Since the learning process of academic English can be facilitated by the use of technology and internet (Reza, 2014), the acceptability of a technology that is being used or will be used is one of the most important variables to be focused at in order to accomplish an advanced development in the educational process (El-Gayar, Moran, & Hawkes, 2011).

According to Cavanagh, et al. (2005), the students need to be more involved in decisions about classroom assessment. Conducting research related to the teacher assessment tools is prominent. By knowing the perceptions of the students toward the use of evaluation media used by the teacher, the teacher can find out whether or not the media is perceived by students. Withal, the teacher becomes more up to date and more adaptive to the technological developments.

REVIEW OF LITERATURE

There are a number of studies related to web-based tests and assessments which provide useful information for this investigation. Firstly, a similar study was done by Dumova (2012). The main purpose of the study is to examine the usability of web-based assessment tools offered by Black-board, and the second purpose is to find the perceptions differences between students in physical sciences and social sciences. This study employed a quantitative research design where the online questionnaire was used as the instrument. Three hundred ninety-five undergraduate students enrolled in introductory courses in physical and social sciences at a medium-size Midwestern University as the research subject. The results of the analysis indicated that the students considered online quizzes and tests are simple to use, user-friendly, and easy to navigate. In addition, there was a difference in student perceptions of online quizzes and tests showing that the students of the social sciences consistently ranked most usability features higher than physical sciences students.

Another study was done by Dashtestani (2015). There are three purposes in this study. The first aim was to find out the EAP students' attitudes from various fields on the use of web-based language assessments of academic vocabulary. The second aim was to investigate the students' perceptions of self-efficacy when using web-based tests. The last aim was to find out the perceived differences of the students from diverse fields of study toward the limitation of web-based tests. The data were gathered by using questionnaire and interview as the instruments of the research. The participants were 120 students from four different disciplines, in Iranian universities. The result revealed that the majority of students had positive attitudes toward web-based tests covering the easy procedures of taking tests through webs, low levels of anxiety, high motivation level, immediate feedback, features of multimedia, energy effectiveness, omnipresent opportunity to take the test, user-friendliness, scoring accuracy, and provided feedback for test items.

Damara (2016) also conducted research with similar topic. This study investigated the students' perceptions of the use of Kahoot used as an ice breaker for a class of movie interpretation. This study employed a quantitative research design, especially survey research involving 66 students in movie interpretation

class as the participants. This research applied questionnaire, observation, and interview. The result of this study revealed a positive perception toward the use of Kahoot! quizzes. Kahoot! as an ice breaker helped students to learn with fun and students become more motivated to learn.

Another study comes from Kilickaya (2017). This study had three purposes formulated into four research questions. The first purpose is to find out whether there is a significant difference between two groups, control and experimental, in regard with their final exam scores. The second purpose was to find out the correlation between the quiz scores and their final exam scores obtained by the experimental group. The third purpose is to find out the views of the students in the experimental group on preparation for the classroom discussions. The last purpose is to find out the students' perceptions of advantages and disadvantages of the use of online quizzes. The participants of the study included 54 undergraduate pre-service Turkish teachers. Quantitatively, it was revealed that a significant difference was discovered between the control and the experimental groups indicating that online quizzes done before the lecture (pre-lecture online quizzes) had a positive effect on the experimental group students' academic performance. Moreover, there was a relationship between the quiz and final exam scores of the participants in the experimental group. Qualitatively, the findings showed that the online quizzes played before the lecture had guided them to understand the basic concepts. Furthermore, the online quizzes helped the participants get prepared for the classroom discussions. The last findings revealed the advantages of online quizzes using quizstar were easy to use, user-friendly, had good navigation, and were accessible. The participants add some disadvantages such as the computer breakdown and internet connection loss.

Another study was conducted by Basuki and Hidayati (2019). They investigated the students' perceptions of Kahoot and Quizizz's efficacy in a daily online quiz, exploring the students' choice about which web-apps is better. The data was gathered by utilizing a questionnaire given to 250 students of the English Education Department as the participants. The data analysis of the questionnaire was analyzed quantitatively by implementing Likert scale. Positively, the result of the study described that Kahoot and Quizizz as the students' web-apps daily online quizzes brought an overwhelming efficacy and students also preferred Quizizz over Kahoot. Despite the large number of studies on web-based assessments, there is limited information about their applications in English class at secondary school context. Therefore, this study aimed at identifying the students' perceptions of the use of web-based tests and examining the problems experienced by the secondary students when using web-based tests in the classroom context.

METODE

The present study used survey research to investigate students' perceptions of web-based test in English class. Survey research is a quantitative or numerical representation of a population's trends, attitudes, or views based on the study of a sample of that group (Creswell, 2014). Furthermore, survey research was considered as the appropriate method to identify the description of the exact statistics of the perceptions in this present study. One hundred and fifty nine secondary school students were chosen as the population and one hundred and

fourteen students of the population were included as the sample. The sample was selected through proportional random sampling used to obtain a representative sample.

The data were retrieved from the questionnaire adapted from the previous study done by Dashtestani (2015). The questionnaire was divided into two parts. In the questionnaire part one, there were 14 items for collecting students' perception toward the use of web-based tests and there were 8 items for collecting the data about the problems faced by the students when using web-based tests in the questionnaire part two. For the first questionnaire, Five-point Likert-scales was used ranging from strongly agree to strongly disagree for measuring students' perceptions toward the use of Web based test. While ever/never choices are used in the questionnaire part two. "Ever" means that the student has experienced the problems, "Never" means that the student has never experienced the problems.

The questionnaire was distributed in each class' Whatsapp group by the teacher. Besides, the questionnaire was completed by students online via Google Form, which is one of the Web Based Test platforms. It took one-sit and merely required around 5 to 10 minutes to be completed. The data were then analyzed using the descriptive statistic in SPSS. Moreover, the criteria of students' perceptions will be categorized based on Ratmingsih, Arini, and Parmadewi (2017) as follows:

Table 1. The Criteria of The Students' Perception

No.	Percentage	Criteria
1	$x < 39\%$	Very negative
2	$40\% < x < 54\%$	Negative
3	$55\% < x < 69\%$	Moderate
4	$70\% < x < 84\%$	Positive
5	$x < 85\%$	Very positive

RESULTS AND DISCUSSION

In this section, the survey and the data analysis result are presented based on three research questions. The first is the result of data about students' perception toward the use of web-based tests, second is the result of the data about some problems faced by the students when using web-based tests, third is the most common problem faced by the students when using web-based tests.

Students' Perceptions toward the Use of Web-Based Test

The result of the study showed that the mean of the total score was 50.35 or 71.93% which means the students' perceptions of the use of web-based tests were categorized as the positive perceptions. The findings of this study revealed that the majority of the students had positive perceptions of the use of web-based tests related to the low levels of anxiety, high motivation level, immediate feedback, features of multimedia, time and energy effectiveness, omnipresent opportunity for taking the test, user friendliness, and scoring accuracy.

The positive perceptions in each aspect are analyzed statistically. First, using the web-based tests can reduce students' anxiety level. Based on the data, it was found that 11 students (9.6%) strongly agreed and 56 students (49.1%) agreed that they felt less anxious when taking a web-based test. It is in line with Baig's (2018) study revealing that the use of web-based tests can reduce anxiety level. Second, the students were served with the presentation or multimedia features of web-based tests. It was found that 15.8% of the students strongly agreed and most of the students as much as 45.6% agreed that multimedia features could be used and provided in web-based tests. As stated by Roever (2001), the multimedia features can be provided in a web-based test.

Third, web-based tests saved energy and time. The result showed that students perceived web-based tests as energy and time saver. There were 12.3% of the students strongly agreed and 40.4% of the students agreed that a web-based test was time-saving. Regarding energy effectiveness offered by web-based tests, 10.5% of the students strongly agreed and the majority of the students as much as 45.6% agreed that using a web-based test is energy-saving. For example, the students were not required to fill or mark with a pen and erase the answer manually. Roever (2001) states that without too much effort, anybody with a computer or mobile devices can take a web-based test.

Fourth, web-based tests allowed the students to do the test anytime and anywhere as they were given the deadline by only working using the networking site. There were 20.2% of the students strongly agreed and 46.5% of the students agreed that a web-based test could be administered at any time. Moreover, 27.2% strongly agreed and 57% agreed that web-based tests could be taken anywhere. Roever (2001) asserts that as long as students are in a comfortable place and the internet is available, a web-based test can be administered both at school and at home.

Fifth, web-based tests were user-friendly. The result showed that a high percentage of the students 11.4% strongly agreed and 45.6% agreed that a web-based test was user friendly. It was also found that 11 students (9.6%) strongly agreed and 46 students (40.4%) agreed that it was easy to take a web-based test. However, students were rather unsure whether it was easy to take a web-based test since 44.7% of the students chose neutral. Still, the overall students had a positive perception on the user-friendliness of web-based tests, as Dashtestani's (2015) study also found that user-friendliness was one factor contributing to how the students positively perceived the importance of web-based tests. Sixth, the scoring system of the web-based test is considered accurate. The result showed that the majority of the student received an accurate scoring system. There were 15.8% of the students strongly agreed and 37.7% of the students agreed that a web-based test's scoring system was accurate and free of error. As Dashtestani's (2015) research found that the accurate scoring system of web-based tests made students more enjoyable to take the test. Seventh, the students also had a positive perception toward the provision of feedback on a web-based test. 37.7% of the students agreed and 14.9% of the students strongly agreed that the teacher provided feedback on a web-based test. There were also 47.40% of the students agreed and 5.40% of the students strongly agreed that they received good quality

feedback. This result is in line with Dashtestani (2015) who found that the students were positive toward the feedback provided on a web-based test.

Besides the positive perceptions toward the use of web-based tests, the students were also identified to have a moderate perception. The moderate perception was disposed to the motivation of the students in doing the test. It was found that the majority of the students or 54.40% was still doubt that a web-based test could increase their motivation when doing the test. This can be caused by the problems they face while doing the test (Dashtestani, 2015). This finding was different from Marriot (2009) who found that online testing through the internet can increase students' motivation to enhance their performances while doing the test. However, the students had a positive perception when asked if a paper-based test can be replaced by a web-based test. They claimed that a web-based test was better compared to a paper-based test, so it was possible that the web-based test can replace the paper-based test. In line with Dashtestani (2015), the students prefer web-based tests than traditional paper-based tests.

Table 2. The Distribution Table of the Students Perception of Web Based Test

No	Statement	SD	D	N	A	SA	Ns	S	M	P	C
		1	2	3	4	5					
1	I feel less anxious when taking a web-based test	1	8	38	56	11	114	410	3.60	71.93	Positive
2	Multimedia features can be used and provided in a web-based test	0	5	39	52	18	114	425	3.73	74.56	Positive
3	Taking a web-based test is energy-saving	2	6	28	66	12	114	422	3.70	74.04	Positive
4	Taking a web-based test is time-saving	1	11	42	46	14	114	403	3.54	70.70	Positive
5	A web-based test can be taken at any time	0	14	24	53	23	114	427	3.75	74.91	Positive

6	A web-based test can be taken anywhere	0	2	16	65	31	114	467	4.10	81.93	Positive
7	A web-based test is user-friendly or easy to operate	0	10	39	52	13	114	410	3.60	71.93	Positive
8	Taking a web-based test is easy	1	5	51	46	11	114	403	3.54	70.70	Positive
9	Web-based test scoring is accurate and error-free	0	9	44	43	18	114	412	3.61	72.28	Positive
10	I received feedback on each item	1	14	39	43	17	114	403	3.54	70.70	Positive
11	I received immediate feedback taking a web-based test	1	13	52	42	6	114	381	3.34	66.84	Positive
12	I received high-quality feedback taking a web-based test	0	6	48	54	6	114	402	3.53	70.53	Positive
13	I feel motivated when taking a web-based test	2	13	62	30	7	114	369	3.24	64.74	Moderate
14	It is possible to replace traditional paper-and-pencil tests	2	10	42	42	18	114	406	3.56	71.23	Positive

with a web-based test				
TOTAL	5740	3.60	71.93	Positive

Note:

- SD : Strongly Disagree
- D : Disagree
- N : Neutral
- A : Agree
- SA : Strongly Agree

- Ns : Total Sample
- S : Total Score
- M : Mean
- P : Percentage
- C : Perception Category

In general, the finding of this study is in line with the previous study done by Dashtestani (2015) that found Iranian English for Academic Purpose (EAP) students were generally positive about the use of web-based tests in the EAP context. The findings of the present study also in line with the previous study which identified the positive perception of EFL/EAP students about web-based test (Levin & Gordon ,1989; Powers & O'Neill, 1993).

Problems Faced by the Students When Taking a Web-Based Test

Although the students have a positive perception toward the use of web-based tests, it does not mean that there are no problems faced by the students while doing the test. To find out the student problems when taking a web-based test, the researcher provided 8 statements from 6 problems in close-ended questions and one open-ended question about the problem out of the 6 problems. The students were asked whether they had experienced other problems besides 6 problems that had been mentioned by the researcher. Total of 114 students 111 or 97.4% had experienced all those problems. Only 3 or 2.6% of 114 students had never faced problems when using a web-based test.

Problems Faced by the Students Based on Close-Ended Question

Based on the closed ended question it was found that the students faced server failure, browser incompatibility, lack of security, unfamiliarity, internet connection issue, and mobile device breakdown. The first problem was server failure, the student faced difficulties accessing the Web based test or could not continue the test if they were logged out from Web based test. As Roever (2001) have said that server failure causes students to be unable to access or continue the

testing session. The finding of this study was similar to the previous study by Dashtestani (2015).

The second problem was browser incompatibility, the students' web browser was incompatible with the testers' web browser and then caused students cannot access the web-based test. As Roever (2001) stated that browser incompatibility between the tester and the web browser students' have can cause the problem when students taking a web-based test. The finding of the current study similar to the previous study by Dashtestani (2015).

The third problem was lack of security, the students can cheat on each other and expose the test items because the web-based test was conducted without the teacher's supervision. In line with the study of Özden, Ertürki, and Sanli (2004) stated another issue with online assessment is the lack of instructor control over assessment conditions since students take exams remotely, so there is no way to know if the tests are being taken by students registered for the course without assistance from other students or resource materials such as a schoolbook. The fourth problem was unfamiliarity. The majority of the students were unfamiliar with the web-based test and the mobile devices. According to Alruwais, Wills, and Wald (2018), one of the issues with online assessment is that students are unfamiliar with computers and the online assessment procedure. The present study shared the same result as Dastestani (2015) who found that there were many students unfamiliar with the use of internet technology and need to be trained. The unfamiliarity can affect students' test scores. As stated by Taylor, Kirsch, Eignor, and Jamieson (1999) technology familiarity may have an impact on the students' score.

The sixth problem was the mobile device breakdown possibility. The test could not be taken by the students because their smartphone or laptop was broken. As stated by Roever (2001), the mobile devices' breakdown has also become one of the web based test limitations. The finding of current study similar to the previous study by Dashtestani (2015). The seventh problem was the internet connection issue. the students were annoyed when they had to do the test and at that time the signal was lost or their internet quota was run out. Consequently, they could not access or continue answering the questions on web based test. Kilickaya (2017) also found that students faced internet connection issue while doing the online quizzes on Web based test.

Then, to make it simple, the data retrieved from the questionnaire is presented in table 2 as follow:

Table 3. The Percentage Table of Students' Problems

No	Statement	Percentage		Problem
		Ever	Never	
S1	I cannot access web based test because of a server failure so I cannot do the test	(106) 93%	(8) 7%	Server failure
S2	I cannot access web based test because of a browser incompatibility	(55) 48.2%	(59) 51.8%	Browser incompatibility
S3	Item exposure had occurred and caused students to cheat on each other	(45) 39.5%	(69) 60.5%	Lack of security

S4	I am not familiar with the web based test used	(54) 47.4%	(60) 52.6%	Unfamiliarity
S5	I am not familiar with the smartphone or mobile device that I used	(43) 37.7%	(71) 62.3%	Unfamiliarity
S6	My smartphone or mobile device is broken when taking web based test	(69) 60.5%	(45) 39.5%	Mobile devices breakdown possibility
S7	My signal network is lost when I take a test on web based test	(100) 87.7%	(14) 12.3%	Internet connection issue
S8	My internet quota is running out when I take a web based test	(71) 62.3%	(43) 37.7%	Internet connection issue

Problems Faced by the Students Based on Open-Ended Question

The result of open-ended question indicated three problems that were not mentioned in close-ended question. The problems were: mobile device unavailability, mobile device compatibility, and time limitation. Some students stated that they did not have any facilities such as smartphones or laptops and they had to borrow it from their relatives. Other students stated that their smartphone was outdated, so it was incompatible with the web-based test. Moreover, the students sometimes feel that the time allotted to complete the test was insufficient. Especially they require extra time to answer open-ended question such as an essay. Even though paper-based tests were limited by time, time border or time count down which was provided in some web-based tests could distract students and make them felt the time ran faster. This finding confirmed the study conducted by Özden, Ertürk, and Sanli (2004) which indicated such a problem.

The following table showed students' frequency for each aforementioned problem.

Table 4. The Percentage Table of Students Problems Based on Open Ended Question

No	Problems	Frequency	Percentage
1	Mobile device unavailability	2 students	1.75%
2	Mobile device compatibility	5 students	4.38%
3	Time limitation	10 students	8.7%

The Most Common Problems Faced by the Students When Taking a Web-Based Test

The result of the study revealed that the most common problem faced by the students in using a web-based test was server failure problem. They could not access the web-based test because of a server failure and it made them could not do or finish the test.

The following table showed the percentage of the students' problems which were ranked from the most experienced to the less experienced.

Table 5. The Rank of Students' Problems

No	Percentage	Problem
1	93%	Server failure
2	60.5%	Lack of security
3	57.45%	Unfamiliarity
4	51.8%	Browser incompatibility
5	39.5%	Mobile devices breakdown possibility
6	25%	Internet connection issue

This finding was different from the result of the previous study by Dashtestani (2015) which discovered that the main problem in implementing web-based tests was related to the unfamiliarity problem, such as test accessibility. It means they could not access the web-based tests because of a server failure and it made them fail the test.

CONCLUSION

This study reveals that the use of web-based tests has contributed positively to the secondary school students' efforts while taking a test. The positive perceptions derive from some factors such as the test anxiety decline, time saving tools, flexible test administration time, user friendliness, accurate scoring system, and accessible teacher feedback. However, despite the ease of the test features towards students' assessment and scoring, the web-based tests lead to a number of problematic situations, for example: server failure, browser incompatibility, lack of security, unfamiliarity, internet connection issue, and mobile device breakdown. Moreover, server failure is the most problematic reason why students find it difficult to take a web-based test. This study is a mini study involving students only from one secondary school in Indonesia. Therefore, the future researchers are suggested to involve more participants from various secondary school to receive richer results concerning the use of web-based tests.

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