USING MOBILE PHONE FOR ASSESSING UNIVERSITY STUDENTS IN ENGLISH LITERATURE IN JORDAN

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Abstract:

The purpose of this study is to determine whether the use of mobile Phone for assessing university students in English literature (Novel 1) is an effective strategy compared to the paper-based assessment strategy.

The researcher followed the equivalent pre/post-test two group designs. To achieve the aim of the study, a pre/post-test assessment was constructed to assess students in English literature (Novel 1). The test consisted of 25 multiple choice questions selected from two novels: Pride and Prejudice and Robinson Crusoe (Appendix 1).

The subjects of the study consisted of 129 students distributed on two sections, which were selected purposefully enrolling in Al- Zaytoonah University during the second semester of the academic year 2010/2011.

The participants were (29) male students for the experimental group and (32) male students for the control group, while the female students for the experimental and control group were (33) and (35) respectively. Those participants were distributed among two purposefully selected sections in Al Zaytoonah University.

Descriptive statistical methods were used (means and standard deviation) for pre and post-tests of students' performance in English literature (Novel 1) to experimental and control groups. Comparison statistical methods were used (Two Way ANOVA) analysis of variance to make a comparison between the control and the experimental group, gender variable (male and female), and interaction between them.

The findings of the study indicated that there were statistically significant differences in the post- test between the control group and the experimental group in favor of the experimental group, and there was no statistically significant difference in the students' performance due to gender. There was no statistically significant difference due to the interaction between gender and group.

The researcher proposed some recommendations to enhance the effect of using Mobile phone for assessing English literature on students' performance such as conducting further researches on other populations and for a longer time.

Keywords: Assessments, mobile phone, Jordan

Theoretical background

Introduction

Cell phones are getting smaller and more powerful each day. The disposable cell phone is already patented and being manufactured; it is a mere two by three inches, with the thickness of three credit cards, and is made entirely of paper (the circuit board is printed with metallic conductive ink). Such phones, in volume, will likely cost less than a dollar each, with the air time for educational uses likely subsidized by carriers and others. Some already see mobile bills shrinking to only a few dollars as the mobile companies pay off their investments in the new networks (Stone 2004).

Assessment is central to teaching and learning. The assessment information is needed to make informed decisions regarding students' learning abilities, their placement in appropriate levels and their achievement.

According to Sadler (2005), assessment refers to the making of evaluation on students' overall performance and generating assumptions regarding their learning and production education-wise, which include the quality or achievement in tasks such as tests, projects, reports and examinations. In the other hand, the success of any assessment is depending on the effective selection and use of appropriate procedures as well as on the proper interpretation of students' performance. Thus, assessment procedures also help in evaluating the suitability and effectiveness of the curriculum, the teaching methodology and the instructional materials. Van der Watering *et al*. (2008) note that students considered the traditional assessment to be primarily a measurement consisting of comprehension and application-based questions that required the drawing of conclusions, problem solving, analysis, interpretation and critical thinking. The correlations between students' preferences and assessment perceptions in their findings were not significant due to the existence of a distinction between students' preferences and their perceptions.

Traditional assessment modes in crowded classrooms can be a serious load on the instructors (Mercier et al., 2004; Kim, 2005). Considering roles of the instructors in digital age, use of mobile phone, internet and even wireless technologies in the assessment can be

very useful starting point for the instructors in order to be successful in integrating new technologies to the courses. Moreover, this integration process will support their professional career development.

Significance of the study

The current study on the effect of using mobile Phone-based and Paper-Based assessment on students' achievement in English literature responds to the increased demand in the use of technological assessment in education to meet the new educational needs. And also, the mobile Phone-based assessment procedures might be a source of excitement and motivation to Jordanian students in their English literature courses.

Statement of the problem

Using mobile phones in Jordan have increased greatly to a degree that nearly everyone in Jordan owns one. It is time to investigate what mobile phone can offer in the area of assessment.

Many studies were written on the use of mobile phone and paper and pencil all over the world, however, the researcher found no studies on the impact of using mobile phone on assessment in Jordan. So this study aims to shed light on the most effective way on assessment.

Purpose of the study

The purpose of this study is to determine whether the use of mobile Phone-based assessment strategy is effective in evaluating students' achievement in English literature compared to the paper-based assessment strategy used in Jordanian Universities.

Questions of the study

This study attempts to answer the following questions:

1-Do students who are assessed using mobile phone get higher marks in English literature than those who are assessed using paper and pencil?

2-Is there a difference in students' achievement between the two groups due to gender?

Limitations of the study

This study is limited to the male and female fourth year students in Al Zaytoonah University, and to any other similar samples. Besides, it is limited to the using of mobile phone.

Literature review

In recent years, most universities recognized the educational excellence of the wireless campus. This is a great opportunity for the students to access information more easily at any area of the campus using their laptops. In addition, with the promotion of Palm, Pocket PC and Mobile Phones as learning media, the number of practices which deals with integrating such devices into instruction has increased in the universities. Thus, the students can reach the course scores, discussion forums, information systems and tests by using mobile phones and PDA devices whenever and wherever they want.

Seppälä and Alamäki (2003) conducted a study on comparing the effectiveness of face-to-face, internet and mobile based instruction. As a result of their study, they suggested that innovative internet and mobile solutions can be useful for academic teaching because of providing possibilities for open teaching. Use of WAP or SMS based tests through PDA, PALM, mobile phone or computer in higher education has been promoted due to the fact that they support the learning process of the students, offer exercise media and provide the opportunity to test the expected learning level achieved (Kennedy and Sugden, 2003; Evans and Taylor, 2004; Mercier, et al., 2004; Lim and Lim, 2006; Scornavacca and Marshall, 2007; Wentling, Parkz and Peiper, 2007).

Homan and Wood (2003) analyzed the achievement level and views of the students on the paper based and mobile based tests in internet based wireless and traditional classrooms. They found that there was no significant difference between students' achievement level and the students had positive views about the wireless test conducted on PDA, however the students stated that they wanted to use the infrastructural opportunities of the university, instead of their own devices.

Seppala et al (2003) makes use of mobile devices (phones and digital cameras) to allow supervising teachers and trainee teachers to share and discuss teaching ideas. Short message service (SMS) and digital pictures could be uploaded to a central server accessible by all. The study noted considerable amount of exchanges amongst the participants, especially in digital pictures.

All the previous studies tackled the issue of using mobile phone for evaluating students but in different ways, no study among the previous studies focused on using mobile phone for assessing English literature. So, the researcher was encouraged to conduct the current study to investigate the effect of using mobile phone for assessing English literature and its effect on students' achievement.

Design and Methodology

The researcher discussed the procedures that she used to conduct the study. She described the study variables, population, sample, instrument, procedures and statistical analysis that were used in the study.

Variables of the study

-The independent variables:

1- The assessment strategies (Mobile Phone-based and Paper-Based assessment).

2- Gender; male and female

- The dependent variable: The students' achievement.

Population of the study

The population of the study consisted of:

All the students of fourth year enrolling in Al Zytoonah University during the second semester of the academic year 2010/2011, they were 680 female students and 565 male students.

Participants of the study

The subjects of the study consisted of 129 students and distributed on two sections, which were selected purposefully. The first section was evaluated using mobile phone-based assessment; the second section was evaluated using paper and pencil-based assessment. Table (1) shows the distribution of the subjects of the study according to group and gender variables.

Table (1)

Distribution of the participants of the Study according to Group and Gender Variables

Group	Gender	N
Mobile phone-based	Male	29
	Female	33
	Total	62
Paper-based	Male	32
	Female	35
	Total	67

Table (1) shows that the participants in the study were male and female students in the experimental and control groups.

Design of the study

This study was carried out to follow the equivalent pre /post-test two-group design. The experiment consisted of two levels: The participants of the experimental group were exposed to the mobile phone-based assessment. However, the subjects of the control group were exposed to the paper and pencil-based assessment. A pre-test was given before the application of the assessment techniques to both groups to make sure they are equivalent and the same test was administered as a post-test after applying the assessment techniques to see whether the techniques had any influence on the groups and which technique had more influence on the subjects than the other.

Instruments of the study

The researcher developed a test based on the instructional material of the Novel course. The test was prepared by the researcher. She validated it and made it reliable.

The experimental group as well the control group, were taught by the instructor of the course. The subjects in both groups underwent a pre-test to determine their actual level before starting the experiment, and the same test was administered as a post-test at the end of the experiment to assess subjects' achievement. The time interval between the pre-test and the post-test was (12) weeks; a period long enough to minimize the effect of the pre-test on the

results and conclusions of the experiment; The test contained twenty right or wrong statements.

Procedures of the study

All participants in the study were enrolled in two sections designed to examine the effect of using mobile Phone-based and Paper-based assessment in evaluating students' achievement in English literature.

Students in both sections were given the same teacher created, criterion-referenced final examination. The results of this final exam were calculated to show the effect of applying this new strategy on the achievement of the students.

The researcher used mobile phone Phone-based assessment using hot java software with the first section and paper-based assessment with the second section. A practice quiz was offered to students prior to the examination. Each of the two tests comprised 20 right or wrong questions selected from the novel "Robinson Crusoe". All the students received the same test questions.

Findings of the study

The purpose of this study is to investigate the effect of using mobile phone-based assessment on fourth year students' achievement in English literature in Al Zaytoonah University.

The researcher followed the equivalent pre /post test two group designs. Therefore, the means, standard deviations and Two-Way ANOVA analysis of variance were used to analyze data. The results will be displayed based on the questions of the research.

To determine if there is a difference between the male and the female groups, a t-test for independent samples was conducted. Table 2 shows the results.

Table 2: Means and Standard Deviations of the Achievement of Male and Female Groups on the Pretest.

GROUP	SEX	Mean	Std. Deviation	N
Experimental	Male	52.14	6.707	29
	Female	53.12	8.710	33
	Total	52.66	7.790	62
Control	Male	52.71	7.925	31
	Female	50.42	7.546	36
	Total	51.48	7.751	67
Total	Male	52.43	7.305	60
	Female	51.71	8.177	69
	Total	52.05	7.762	129

Table 2 shows the mean and standard deviation of the groups on the pre-test. It shows the experimental group at 52.66. While the control group at 51.48. As for the males and females, the males were 52.43 and the female were 51.71.

To determine if the two groups are equivalent in English literature, a pre-test was conducted and Table 3 presents the results.

Table 3: Two-way ANOVAs Results of the Experimental and the Control Groups on the Pretest.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
GROUP	36.443	1	36.443	.602	.439
SEX	13.743	1	13.743	.227	.635
GROUP * SEX	85.995	1	85.995	1.421	.235
Error	7564.101	125	60.513		
Corrected Total	7711.721	128			

Based on the Two-way ANOVAs on the pre-test, the groups were equivalent. Hence, level of significance is .439 while is not significant at $\alpha \leq 0, 05$. Also the groups in terms of gender were equivalent at a level of .635. This is not statistically significant at $\alpha \leq 0, 05$. This means that the groups were equivalent on the pre-test.

At the end of the experiment, a t-test for independent samples was conducted to determine if there was any statistically significant difference between the males and the females on the posttest, which may be attributed to gender. Table 4 shows the results.

Table 4: Mean and Standard Deviations of the Achievement of Male and Female Groups on the Posttest.

GROUP	SEX	Mean	Std. Deviation	N
Experimental	Male	83.31	7.305	29
	Female	84.70	6.743	33
	Total	84.05	6.988	62
Control	Male	75.06	9.494	31
	Female	76.64	11.539	36
	Total	75.91	10.593	67
Total	Male	79.05	9.403	60
	Female	80.49	10.314	69
	Total	79.82	9.889	129

Table 4 shows the mean and standard deviation of the groups on the post-test. It shows the experimental group at 84.05. While the control group at 75.91. As for the males and females, the males were 79.05 and the female were 80.49.

The researcher also conducted a two-way analysis of variance to analyze the posttest achievement scores of the two groups. Table 5 shows the results.

Table 5: Summary of the Two-way Analysis of Variance of the Achievement of the control and the Experimental Groups on the Post-test

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
GROUP	2129.579	1	2129.579	25.811	.000
SEX	70.240	1	70.240	.851	.358
GROUP * SEX	.282	1	.282	.003	.953
Error	10313.353	125	82.507		
Corrected Total	12516.899	128			

To answer the first question: 1-Do students who are assessed using mobile phone get higher marks in English literature than those who are assessed using paper and pencil?

The table shows that the level of significance is .000 which is statistically significant at $\alpha \leq 0, 05$ on favor of the experimental group. To answer the second question: 2-Is there a difference in students' achievement between the two groups due to gender?

Table five shows significance .358 which means it is not significant at ($\alpha \leq 0, 05$)

To sum up, the researcher believes that the difference in the achievement of the fourth year students was attributed to the using of mobile phone-based assessment. The experimental group subjects managed to significantly improve their level in English literature in a period of 8 weeks. The improvement achieved by the control group subjects, however, was not statistically significant. By comparing the results achieved by the two groups, the researcher reached the conclusion that the improvement achieved by the experimental group may have been attributed to the way she assess her students; using mobile phone-based assessment.

As a result of this experience, the researcher concluded that students were more engaged in learning literature and got higher marks when they were given a chance to use technology such as mobile phones in their exams.

Discussion

The study revealed that students gained better scores in mobile phone-based test than in paper-based test in the course "Novel" in English literature.

The study also revealed a correlation between a student's gender and the student's test performance. Thus, instructors may include mobile phone tests in their traditional in class courses or even using the mobile phone as a means of teaching and testing courses to reap the benefits of mobile phone testing, which include instant grading and feedback to the students.

When instructors test students via mobile phone, they free up class time that would have been spent in administering tests. The students and instructors may spend this additional time on new or more advanced subject matters.

The limitations of this study include mobile phone-based test conditions that I manipulated to make similar to the in-class test conditions. The mobile phone-based tests were taken in a class room and proctored by the instructor. The researcher used this condition to ensure that there were no incidents of cheating in the mobile phone test. All students started at the same time. The condition, in fact, is different from normal of mobile phone testing conditions in which testing is allowed to take the test at any time or place. Future researches may try to determine there is a difference in student performance in proctored versus unproctored mobile phone-based tests.

A future extension of this work may include assigning both tests—mobile phone and paper-based —to two random groups of students and comparing the mobile phone-based test performance in its natural conditions with the paper-based in-class performance of the students for the same test.

Future researches may explain why the paper based test assessment consistently had test scores that were significantly lower than the other method of assessment. In addition, the results showed that gender was not correlated to the results.

Further studies are necessary to determine whether these results are applicable to other subjects of teaching or not.

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