Authentic Assessment Strategies used to Improve Distance Learning Outcomes

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Abstract

This paper tried to investigate the degree of using online authentic assessment strategies by lecturers at universities to improve distance-learning outcomes. The participants consisted of (35) lecturers, who teach at universities, were chosen randomly. To achieve the purpose of this paper, a questionnaire was developed consisting of 24 items. For data analysis, the researcher used the suitable statistical analysis, Means, percentages, standard deviations, and degrees, a t-test and the Two-Way Analysis of Variance (ANOVA). The results revealed that the degree of using authentic assessment either formative or summative strategies by university' lecturers to improve online-learning outcomes was moderate with a mean (2.74). Moreover, the findings revealed that that there were statistically significant differences in the means and standards deviations of using online- authentic assessment strategies among lecturers attributed to their teaching experiences in favor of those who had more than 9 years' experience. In addition, the results also showed that there were not any statistically significant differences in using online- authentic assessment strategies among lecturers due to their majors.

Keywords: Authentic assessment, online –distance learning, summative strategies, formative strategies

INTRODUCTION

> Assessment performances are day-to-day activities that can also be authentic and engaging demonstrations of students' abilities to grapple with the central challenges of a discipline in real life contexts (Kulieke, Bakker, Collins, Fennimore, Fine, Herman, Jones, Raack, & Tinzmann, 1990, p.2).

Educational system tries to accustom the learners with improvement and development in the areas of teaching and learning. This system is responsible for integrating the learners in everyday life through stepping from the secondary stages at schools to advanced levels at universities in a systematic process. The successful system tries to qualify learners to develop their societies. Consequently, teaching and learning process, which is considered as a complex process that deal with output and input variables such as students, teachers, curriculums, classrooms, must meet the learners' cognitive,

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linguistics and emotional factors. Learners become active members in the educational process, learning, teaching and assessment. They select, perceive, interpret, and integrate new information to form a coherent and meaningful whole with their prior knowledge and former experiences (Dochy, Segers, & Buehl, 1999).

Because of the tremendous technological development that has entered all sectors of life, including education, and because of the epidemiological conditions that the world has experienced recently, online learning plays a complementary role in traditional mainstream education as well as in dominating global education. Online learning is an organized process that aims to achieve educational results using technological means that provide sound, image, and interaction between the learner and the faculty in terms of educational content and activities (Basilaia & Kvavadze, 2020).

Online learning is not just one pedagogical structure or approach (O'Keefe et al., 2020; Teräs et al., 2020) with different educational materials and forms of communication serving a specific purpose (Rapanta et al., 2020). It is a system that employs technology and pedagogy in a meaningful way to ensure an effective and productive learning process and to obtain meaningful learning experiences (Anderson, 2009). During the transition to online learning in emergency situations due to the Covid 19 pandemic, many teachers have had to move courses' content online. Either synchronous or asynchronous content delivery become frequently used in online environments during the pandemic.

The use of technology to provide knowledge, training, and education to learners through information and communication technology can make education accessible by anyone, anywhere, and at any time by providing a diverse and customized set of matching programs and content to the needs of learners and by providing educational content. The development of information and communication technology in the education sector has contributed to the growth of the e-learning market significantly globally, and the continuous development of information and communication technology has led to learning methods that are more cost-effective and effective compared to traditional learning methods (De Medio et al., 2020).

In the new post-pandemic norm, a trend towards blended learning applications is expected in the context of planned educational actions (Bonk & Graham, 2012). Despite the fact that distance / online learning applications give many solutions such as accessibility, vastness and flexibility in education, the fact that they require self-managing abilities puts the learning paradigm at the fore in the context of the new normal for the learner to choose content and how to access it. However, it must be emphasized that applications that require self-directed learning abilities are more attractive to adult learners, and that it is very crucial to guide learners in their classroom performance in terms of providing meaningful learning experiences.

As long as learning is a continuous process, learners learning progress should be assessed and evaluated. Assessment strategies and tools used by teachers present a clear picture about their learners' performance and learning achievement. Assessment is an essential part of teaching and learning process. Since it is a means that enables teachers to judge learners' achievements in terms of the educational outcomes and their suitability to their

levels, attitudes and abilities. Assessment is defined as "a systematic process for gathering data about student achievement," (Dhindsa, Omar, & Waldrip, 2007, p. 1261). Linn and Miller (2005) also defined assessment as a systematic process of collecting data and information about learners' progress towards the learning aims. Walvoord (2010) stated that assessment is "the systematic collection of information about student learning, using the time, knowledge, expertise, and resources available, in order to inform decisions that affect student learning" (p. 2).

Classroom assessment is seen as a crucial component for meaningful teaching and learning process. It is very important because it gives students the necessary feedback on their achievements and then it contributes to improving their learning practices. Goodrum et al. (2005) indicated that assessment "enhances learning, provides feedback about student progress, builds self-confidence and self-esteem, and develops skills in evaluation" (p. 2). Moreover, they stated that effective learning process happen when there is a strong correspondence between teaching, learning, assessment and results. Other researchers such as Struyven, Dochy, and Janssens (2005) stated that there is a significant impact of assessment on students' performance. Linn and Gronlund (2000) assisted that assessment is a vital tool for engaging learners in learning process as well as for sustaining their commitment and abilities to learn effectively. Assessment enables teachers in schools and lecturers in universities to gather information about their students' progress and then to achieve the intended learning outcomes.

Alternative assessment strategies are developed and implemented in classroom to enhance meaningful learning outcomes. Authentic or alternative assessment which is considered as modern assessment should be taken into account from teachers in order to evaluate the learners' achievements in their real learning situation. Authentic assessment strategies which used by teachers make their evaluation of the learners' learning situation realistic. In addition, they improve the learners' ability to think critically, analyze information and develop their creativity (Moon, Brighton, Callahan & Robinson, 2005, Hallam and Brookshire, 2002 & Marzano, 2002)

Using authentic assessment strategies either in classroom or during the distance learning experience is flexible enough to meet the varying needs and develop growth of learners. Moreover, authentic assessment is considered as a diagnostic strategy that is done over a period of time to provide accuracy, fairness, and appropriateness results (Cizek, 2009& Miller et al., 2017). This provides opportunities for learners to focus on the learning management process and enable them to evaluate the learners' achievements in their real learning situation

Authentic assessment strategies used by classroom teachers, give them opportunities to assess students' performance through their home works and class assignments, group and pair works, their body language, exams, quizzes ... etc. In addition, these kinds of strategies train the learners to assess their learning progress by themselves, address different learning styles and determine the weakness and strength points of their learning process. In Jordan, the Ministry of Education (MOE), adopted these types of authentic assessment strategies and tools: Performance-based assessment, pencil and paper, communication, observation, checklist, rating, rubric, records and learning log.

During distance or online learning, teachers can also assess their learners' learning progress by using many different technological strategies and tools.

Nouwens and Towers (1997) stated that in order to improve the increase the effectiveness of the assessment process, teachers have to:

> 1. develop the learners' independent study skills, 2. promote educational dialogue between the lecturer and student, 3. help identify and deal with students' misconceptions, 4. give direction to learning in key subject areas, 5. relate learning to student work and experiences, 6. permit students to assess their progress, 7. provide fair, valid and reliable assessment, indicate to lecturers the quality of teaching in a subject, 8. provide feedback about strengths and weaknesses of the study materials. (Online document)

Consequently, one of the main duties for distance teachers is to develop methods and ways of getting the needed information to assess the learners' learning progress. Obtaining such information is crucial to know what, when and how to assess and make decision based on the results (Popham, 2011). Thus, this study tries to put much emphasis on the role of these assessment strategies that can be used in a distance education to gather information about their students' progress and then to achieve the intended learning outcomes

Related Studies on authentic assessment Strategies

A considerable amount of research has been conducted in the field of learning assessment strategies. In this section, some studies are going to be presented.

Fritz's (2001) identified the impact of using portfolios to assess learners' performance. The teachers asked their students to select 7 tasks of their works to be assessed. The findings showed that fifty percent of teachers who had more than three years of teaching experience used portfolios in assessing their learner's performance in an effective way.

Dhindsa et al. (2007) investigated the students' perceptions towards authentic assessment strategies in Brunei Darussalam. The researchers used Students' Perception of Assessment Questionnaire (SPAQ) as an instrument to collect the needed data. The findings revealed that there is a need for more attention in the field of assessment process because the overall average value was less than 3.0.

AL- shehri (2008) tried to examine the effective role of formative assessment and formative feedback on learning and teaching process. Forty-nine questionnaires were distributed to the students and teachers at the College of Telecomm and Information (CTI) in Riyadh, Saudi Arabia. The results revealed that the most preferred type of formative assessment strategy used by teachers was the informal type while students prefer the formal one.

Gaytan (2009) discussed the active assessment methods and techniques suitable for online instruction. The researcher stated that online assessment is viewed as a system for assessing students' academic performance. He also emphasized the crucial role of these assessment techniques in educational institutions.

Butler (2009) tried to review studies conducted on authentic assessment strategies used by teachers in these Asian countries: Korea, Taiwan, and Japan. It is noticed that these kinds of authentic assessment procedures were not existed in the three countries despite of the crucial role of applying teacher-based assessments to assess their students' achievements.

Al Kadri et al (2011) investigated students' perceptions of the main function of assessment and the impact of it on learning styles in the clinical environment. The researchers conducted semi-structured interviews with 22 students, clinical supervisors from Sydney Medical School, 25 students, and clinical supervisors from King Saud bin Abdul-Aziz University. After analysis the interviews, the findings showed that there are three important themes should be taken into account through learning process : the function of assessment, learning outcomes and finally authentic assessment.

Mussawy, Rossman, & Haqiqat. (2021) examined learners' perceptions of classroom assessment practices at a public university in Afghanistan. The study also tried to discuss the effective role of a new authentic assessment policy in students' achievement. In order to conduct the study, the researchers implemented the explanatory sequential mixed-methods design. They applied the Students Perceptions of Assessment Questionnaire (SPAQ) to collect the needed data from 400 students who were chosen randomly from three colleges: Agriculture, Education, and Humanities. The results revealed that learners have positive perspectives of the current assessment policy.

STATEMENT OF PROBLEM

Curriculum, instruction, and assessment are the three main components of an education policy, whether be it online or face-to-face. They were called as the "three legs of the classroom stool" by the author Milton Chen. The mean behind this is that each leg must be equally strong in order to function in balanced and supportive way. Teachers may always think on What and how they are going to teach more than how will they assess their students? Consequently, assessment process becomes the least understood implemented effectively during the teaching process. As online education becomes the new normal, especially during the corona pandemic, it is even more crucial to implement the assessment practice to create an effective learning experience (Nhi Nguyen, 2021) . So these questions should be taken into account seriously while teaching: Why and how do teachers assess learners? Do the online classrooms require special assessment strategies? How do lecturers use assessment strategies effectively to provide their students' feedback as well as to improve their learning?

PURPOSE OF THE STUDY

This study tries to put much emphasis on the role of authentic assessment strategies that can be used in distance education to gather information about their students' progress and then to achieve the intended learning outcomes. It tries to investigate the degree of using authentic assessment strategies during online learning by lecturers and investigate if there are any statistically significant differences in using online- authentic assessment strategies among lecturers attributed to their teaching experiences and majors.

SIGNIFICANCE OF THE STUDY

Pelligrino et al. (2001:42) suggests that" assessment has a fundamental role in providing information to help students, teachers, administrators, and policy makers arrive at decisions". So, this study is significant because it identifies the role of authentic assessment strategies that can be used in a distance education to gather information about the students' progress and then to achieve the intended learning outcomes. Learners need to be aware of their abilities and performance regularly. In addition, assessment helps teachers to assess their own online teaching skills.

RESEARCH QUESTIONS

This study tries to answer the following questions:

1. What is the degree of using authentic assessment strategies by lecturers at universities to improve online-learning outcomes?

2. Are there any statistically significant differences in using online- authentic assessment strategies among lecturers attributed to their teaching experiences?

3. Are there any statistically significant differences in using online- authentic assessment strategies among lecturers attributed to their major?

METHODOLOGY

Participants

The study participants consisted of (35) lecturers who teach at faculty of art and faculty of technology at Ajloun National University. They are chosen randomly from Department of English language, Department of Arabic language, Department of History and Department of technology. They are distributed according these variables: teaching experience and major as shown in Table1

Table 1. Distribution of participants Variable

Variable		No	percentage
Teaching Experience	Less than9 years	15	42.857
	More than 9 years	20	57.142
major	Faculty of art /English language/ Arabic language /history	14	40
	Faculty of technology	21	60
		35	100%

Table (1) shows that according to the teaching experience, 15 participants had less than9 years and 20 participants had more than 9 years, but regarding to the major variable , 14 participants from faculty of art and 21 from faculty of technology.

Instrument of the study

Quantitative research was used to collect the needed data. The researcher adapted a questionnaire survey to reveal the role of the assessment strategies that can be used in a

distance / online education to gather data about the students' progress and then to achieve the intended learning outcomes. The questionnaire consisted of 25 items related to those online authentic assessment strategies, summative and formative, used by lectures at Ajloun National University. It is in the form of a five -point Likert scale: Always, often, sometimes, rarely and never.

Validity of the Instrument

To check if the questionnaire measure what is prepared to measure, a jury of specialists in linguistics, EFL, applied linguistics, was asked to checked its' suitability for the objective of the study and provide the necessary comments and suggestions. After that, the suggestions were taken into account and then modifications were done.

The reliability of the Instrument

To verify the stability of the internal consistency of the items of the questionnaire, the researcher conducted a pilot study by trying out the questionnaire on a group of (15) rather than the sample of this study. Cronbach's alpha (Cronbach's α) was used, and it was (0.85). Therefore, to calculate the Stability Index of the scale, it was administered to the pilot sample again four weeks later to calculate the Pearson correlation coefficient between the two applications, and the correlation was (0.82). So, the researcher felt confident about the value of reliability of the questionnaire. Many researchers such as Devellis (1991) stated that a good reliability value of the questionnaire could be if the alpha (α) is at least equal 0.70 (α ≥ 0.70).

Data Analysis

For data analysis, the researcher used the (SPSS) to measure Means, percentages, standard deviations, and degrees. A t-test and ANOVA were also used to reveal the results concerning the participants' variables, teaching experience and majors. The researcher used the following scale:

Low degree 1 1 - 2.49.

Moderate degree 2 2.5-3.49

High degree 3 3.5-5

RESULTS AND DISCUSSION

Results Related to the First Question

What is the degree of using authentic assessment strategies, formative and summative, by university' lecturers to improve online-learning outcomes? Means, standard deviations, degree and the overall degree for each item were calculated as shown in table (2).

Table 2. Descriptive statistics

No	Items	Mean	Standard Deviation	Agreement Degree
	Formative strategies			
1	Peer review	2.40	1.19	Medium
2	Summary and reflection	2.05	1.19	Low
3	Online discussion	2.75	1.37	High
4	.Interactive tutorials	2.45	1.19	Medium
5	Online survey	2.55	1.19	Medium
6	Animation	2.25	1.12	Low
7.	Dialogues simulation	2.85	1.35	High
8.	Digital Flash Cards	2.05	0.69	Low
9.	Game	2.50	1.05	Medium
10	Checklist	2.40	1.23	Medium
11	Automated Self-Tests	2.20	1.32	Low
12	E- portfolio	2.29	1.31	Low
	Total Means	2.395	0.18	Medium
	Summative strategies			
1	Collaborative Inquiry Projects	2.50	1.40	Medium
2	Synthesis Papers	2.65	1.27	High
3	Portfolios	2.70	1.13	High
4	Student publications/Presentations	2.60	1.10	Medium
5	Short Answer Exams	3.00	1.34	High
6	Review/Critique	2.71	1.38	High
7	Learning Logs	3.75	1.02	High
8	Summaries & Reflections	3.55	1.15	Medium
9	Troubleshooting	3.75	1.07	High
10	Online Case Studies	1.99	.882	Low
11	Diagrams & Flowcharts	3.85	0.81	High
12	Postcard Quizzes	3.95	0.94	High
	Total Means	3.083	0.194	Medium
	Total Means	2.74	0.0086	Medium

The table above (2) showed that the degree of using authentic assessment, formative and summative, strategies by university' lecturers to improve online-learning outcomes was high with a mean (2.74). This indicated that the lecturers at universities are aware of using the modern evaluative strategies. It is known that the assessment is directly linked with the outcomes to be achieved which means that the lectures have the responsibility to choose the suitable assessment strategy to measure learning outcome and to measure their students' performance and achievement. The table also showed that the most frequent strategies and which got the highest mean (3.083) with standard deviation of (0.194) are the summative strategies more than formative one.

The table also showed that the degree of using summative assessment strategies by lecturers at university for items (2,3,5,6,7,9, 11 and 12) was high. In other words, the use of Synthesis Papers, Portfolios, Short Answer Exams, Review/Critique, Learning Logs, Troubleshooting, Diagrams & Flowcharts and Postcard Quizzes was high. besides, it can be noticed that the degree of using formative assessment strategies for items 3 and 7 was high. The lecturers preferred using online discussion and dialogue simulation to assess

their student's learning performance and gather more information in an ongoing process throughout a course. The results of this question were consistent with the findings of AL-shehri (2008) who emphasized on the importance of using both formative and summative assessment to evaluate what students learn and how teachers teach.

Results Related to the second Question

Are there any statistically significant differences in using online- authentic assessment strategies among lecturers attributed to their teaching experiences?

Table 3. Means, standard deviations one-way ANOVA and t-test of the participants' responses according to years of experience

		No	*Mean*	*Standard. Deviation*	*"t" value*	*Sig*
Teaching experience	Less than 9 years	15	2.46	.3322	-.812	.411
	More than9 years	20	3.64	.4621	276	.783
Total		35	3.09	.56		

The table above revealed that that there were statistically significant differences in the means and standard deviations of using online- authentic assessment strategies among lecturers attributed to their teaching experiences in favor of those who had more than 9 years experience (mean 3.64) while the mean of lecturers who had less than 9 years experience was (2.46). In his study , Fritz's (2001) showed that teachers who had more than three years of teaching experience used portfolios in assessing their learners ' performance . The findings of this study were in line with Momany & Khaza'li, (2010) and Almola, (2005) who showed that those with more than 10 years of experience performed better in the teaching process . This can be due to that the lecturers who had more experience in teaching process , had abilities for professional teaching and assessment skills .

Results Related to the third Question

Are there any statistically significant differences in using online- authentic assessment strategies among lecturers attributed to their major?

Table 4. Means, standard deviations one-way ANOVA and t-test of the responses according to the lecturers' major

		No	Mean	Standard Deviation	"t" value	Sig
Major	Faculty of art /English language/ Arabic language / history	14	2.674	.34	.013	.990
	Faculty of technology	21	2.673	.21		
Total		35	2.674	.091		

The table above showed that There were not any statistical significant differences in using online- authentic assessment strategies among lecturers due to their majors , where

"t" values reached (.013) by sig (.99). The means of the two groups from different faculties were nearly equal in using online- authentic assessment strategies, summative and formative strategies. This might be due to their awareness of the crucial role of these kinds of assessment strategies which enable them to gather information about their students' progress and then to achieve the intended learning outcomes regardless to the majors. Accordingly, the finding of this paper was in line with the study of Gaytan (2009) who tried to discuss the effective assessment strategies and techniques suitable for online instruction. He insists that there is a need to select the suitable online- authentic assessment strategies among lecturers from different majors

CONCLUSION AND RECOMMENDATIONS

This study tried to highlight the crucial role of using the authentic assessment strategies that can be used in a distance education to gather information about their students' progress and then to achieve the intended learning outcomes. It tries to investigate the degree of using authentic assessment strategies during online learning by lectures. The results showed that that the degree of using authentic assessment either formative or summative strategies by university' lecturers to improve online-learning outcomes was high with a mean (2.74). This indicated that the lecturers at universities are aware of using the modern evaluative strategies. It is known that the assessment is directly linked with the outcomes to be achieved which means that the lecturers have the responsibility to choose the suitable assessment strategy to measure learning outcome and to measure their students' performance and achievement.

Although the findings revealed that that there were statistically significant differences in the means and standard deviations of using online- authentic assessment strategies among lecturers attributed to their teaching experiences in favor of those who had more than 9 years of experience and there were not any statistical significant differences in using online- authentic assessment strategies among lecturers due to their majors, it can be said that assessment is at the heart of educational process .It is a driving force behind effective learning . The transition to distance /online education has highlighted the role of authentic assessment strategies in increasing students' skills and improve their performance and practices in their classroom.

According to the results of this paper, the researcher ascertains to the need of administrating many training courses on online authentic formative or summative assessment strategies to those who teach at schools and universities especially when we notice that the education is rapidly transitioning towards the online platforms in response to COVID-19. Conducting similar studies on the crucial role of using online- authentic assessment strategies among a large sample of lectures and teachers from different majors and different regions is important to determine students' guidance and feedback on their performance.

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