Using an Online Assessment-Based Program for Developing Faculty of Education Prospective Teachers' Test-Making Skills and Self-Confidence

Dr. Omnia Latif Ibrahim Abdel Latif
Associate Professor of TEFL, Dept. of Curricula & Instruction
Faculty of Education – Minia University

Dr. Marwa Gamal Mohamed Shehata
Associate Professor of TEFL, Dept. Of Curricula & Instruction
Faculty of Education – Minia University

Abstract

T *his study aimed at using an online assessment-based program to develop Faculty of Education prospective teachers' (third year English majors) test-making skills and self-confidence. The study was conducted in the first term of the academic year 2022-2023 during the "English Methods of Teaching" course. The study adopted the pre-experimental design. Thirty students enrolled in the 3rd year program at Minia Faculty of Education participated in the study and acted as one study group. The instruments of the study included a test in test-making skills and a self-confidence scale. The online assessment-based program consisted of nine sessions in test-making skills, two hours a week through the Zoom application. Results showed statistical improvement in the post-measurement of test-making skills and in the self-confidence scale. Recommendations and suggestions for further research are presented.*
Keywords: Online Assessment, Test Making Skills, self confidence

Introduction

In the last few years, the COVID-19 pandemic has been a huge challenge to all aspects of life. It caused a worldwide crisis that has affected every field including the educational sector. The unexpected lockdown of all educational institutions starting from kindergartens to

colleges and universities has affected billions of students all over the world. This new and sudden situation has completely changed the educational system with the rise of e-teaching and e-learning. This offers guidance to teachers, institutional heads, and officials on addressing the crisis. Many governments have ordered institutions to cease face-to-face instruction for most of their students, requiring them to switch, almost overnight, to online teaching and virtual education. One of the central parts of this e-teaching and e-learning is to help teachers evaluate their students' achievement and performance. Henceforth, the existing situation demands an online form of the students ' assessment which was earlier done in pen and paper mode.

Tests have become a powerful tool for decision-making in our competitive society, with individuals of all ages being regularly evaluated concerning their achievements and abilities. When constructing curricula, designing student assessments first helps teachers to focus. Therefore, how to perform better on tests has become a big concern for students and teachers in almost all areas. Therefore, the need for teachers to understand and use teacher-made tests to improve students' learning is increasingly becoming important in the field of education (Guskey and Jung, 2013).

Teachers have to be proficient and competent in the area of testing. (Gareis and Grant, 2015). Literature review on test-making competencies and the quality of teacher-made tests showed that test-making competencies are related to the quality of test items (Kinyua and Okunya, 2014). Thus, a teacher's competence in making test items is closely related to designing good-quality tests. When teachers have limited test-making skills, the quality of their tests is

reduced. Tests that are poor in quality negatively affect the assessment validity (Amedahe and Asamoah-Gyimah, 2016).

When teacher-constructed tests are low in quality, teachers and administrators are unable to support the educational opportunities that meet each student's needs (Agu, Onyekuba, and Anyichie, 2013). In other words, the lack of or low degree of validity of the test leads to weak inferences about student learning (Amedahe and Asamoah-Gyimah, 2016). Accordingly, decisions such as students' selection for educational chances would be wrongfully made. Computerized testing has decreased that burden substantially with negligible impacts on validity, (e.g., Woods, Walsh, and Cannon, 2020) have resulted in similar time-saving.

A large body of literature is related to measuring students' self-confidence in learning. Tripathy and Srivastava (2012) believed that self-confidence is an attitude and students with self-confidence believe in their abilities, they are goal-directed, and they believe that they will reach their goals and expectations. Self-confidence is not the same in all areas of a person's life. An individual may be very confident in one area of life and less confident in some other areas of life. In addition, Sadler (2013) mentioned that the new teachers' self-confidence is a key influence in the use of teaching strategies that actively involve the students. Content knowledge and teaching skills were related to feelings of self-confidence,

Classroom assessment plays a vital role in improving teaching and learning as part of the tools used in classroom assessment, teacher-made tests play an important role in

the assessment process. This means that teacher-made tests help in assessing students' prior knowledge. The formative assessment, and the summative assessment of students' learning outcomes lead to making educational decisions. Even though traditional face-to-face lectures had to be moved online with no purposeful planning, the biggest challenge has been the online assessment of the learning process (Garcia- Peñalvo et al., 2021). Even in online teaching and learning, formative and summative assessments are still considered the basic types of assessments. Formative assessments are best when done concurrently and consistently within an online course to identify how well students are learning the material and eventually provide critical observations to learners (Colman, 2021).

Assessment is the process of gathering, describing, or quantifying information about learners' performance. Its principles are not changed in online learning environments, the only difference being how these principles are implemented as compared to traditional learning environments (Rovai, 2000). But what is meant by electronic assessment or online assessment? According to the Joint Information System Committee (JISC: 2007), it is defined as a broad-based term that covers many activities in which digital technologies are used in assessment. Such activities include assessment design, delivery, and marking by computers, or humans assisted by scanners and online tools.

Pereira, Flores, and, Niklasson (2016) mentioned that assessment is recognized as one of the most important and powerful elements of an educational experience, because it gives clear evidence of learning, and shows learner

progress and understanding of the curriculum. Assessment also forms the basis for student self-learning and helps in developing the basic skills. In nowadays information, individual, and societal development are largely steered by technological advances with expectations for enhanced access, freedom and involvement in the construction of learning, including assessment methods. Fives (2013) mentioned that classroom assessments provide teachers with essential information used to make decisions about instruction and student grades. A table of specifications can be used to help teachers frame the decision-making process of test construction and improve the validity of teacher's evaluations based on tests constructed for classroom use.

Tremblay, Lalancette, and Roseveare (2012) mentioned that recent years witnessed various technological advances, including technology-assisted open universities, virtual modes of instructional delivery, and computer modeling and simulation as instructional tools. These technological devices made the process of teaching and learning more interesting. The last modifications in the educational system in Egypt have placed more responsibilities on instructors to use new technologies to improve their teaching practices. This shows that there is an urgent need to use technology to meet challenges in education in the 21st century.

Moreover, online assessment can be a means of evaluating student achievements and performance, giving feedback, or pushing students forward in their learning process in a fully online mode (Tremblay, et al. 2012). Assessments can be either formative to monitor students' progress in the educational environment, or summative to evaluate students' use of criteria. Google Form-based

quizzes, Kahoot! Quizizz, Socrative, and Near Pod, are examples of commonly used assessment tools. Along with the insertion of these tools in the classroom, the inclusion of activities supported by competition can increase the engagement of students. To make online education more interactive, quizzes, and games can be incorporated in the online teaching environment.

Conrad and Openo (2018) explained that the move to online learning in recent decades has raised questions about the nature of assessment with courses and programs. Is it the same? Is it different? How best to do it? This shift in assessment has moved like a glacier, slowly and yet with dramatic effect. The "traditional view of assessment defines its primary role as evaluating a student's comprehension of factual knowledge," whereas a more contemporary definition "sees assessment as activities designed primarily to foster student learning" (Webber, 2012, p. 202).

Examples of learner-centered assessment activities include "multiple drafts of written work in which faculty provide constructive and progressive feedback, oral presentations by students, student evaluations of other's work, group, and team projects that produce a joint product related to specified learning outcomes, and service-learning assignments that require interactions with individuals, the community or business/ industry" (Webber, 2012, p. 203).

As Webber points out, there is a growing body of evidence from multiple disciplines (Dexter, 2007; Candela et. al., 2006; Gerdy, 2002) illustrating the benefits of learner-centered assessment, but these examples "do not provide convincing evidence that reform has actually

occurred" (Webber, 2012, p. 203). So, this indicated the importance of conducting the current study.

The benefits of online assessment are many. Sharma (2023), listed some of these benefits as being:
- Flexible and Convenient
- Immediate Feedback
- Accurate and flexible to learners.
- Learner Experience
- Detailed Analytics & Reports
- Good indicators for learner's performance
- Reduction of assessment costs.
- Testing easily a large number of students at the same time.
- Preferable for the examinees.

Online Assessment and Test Making

Kim (2005) stated that using technology in education has become widespread and there has been a growing interest in using computer-based tests instead of traditional paper and pencil tests because traditional assessment in overcrowded classrooms can be a great load on the teacher. Alsadoon (2017) explained that online assessment provides students and instructors with immediate feedback. Al-Khayat (2017) also said that it enables students and instructors to avoid committing language mistakes.

Appiah and van Tonder (2018) explained that online assessment can be used for testing students' higher-order thinking skills. It is less costly and is very effective for assessing disabled students. For instance, students with visual impairment can adjust the font size to see the

questions. Those with auditory impairments can be provided with auditory assistive tools. It can be taken at any time and place. There is no bias in correction because the answers are automatically corrected. It can be used for assessing students' performance in tasks. Besides, students become responsible for their own learning. It also provides them with positive experiences. Harris and Al-Bataineh (2015) supported the effect of online assessment as it can be more interesting for students and teachers in improving their achievement.

According to Neendoor (2023), teachers can use the following types of test construction:
1. **Multiple-choice quizzes:** They provide students with a question and several answer options. Students select the correct answer from the options provided.
2. **Short answer questions:** They ask students to provide a brief written response. They are often used to test students' understanding of key concepts.
3. **Essays questions:** Longer essays that ask students to demonstrate their knowledge and critical thinking abilities.

Jaymie (2023) mentioned that classroom assessments are a big responsibility for teachers. There are many formats or types of tests such as summative, formative, essay, multiple choice -etc. Many teachers are required to design their own tests. Therefore, when making classroom tests, teachers should take into consideration how they will be used and if they are designed to measure what is supposed to be measured. Whether all the students should have the same opportunities to show what they have learned, the scoring system has to be consistent with that of the school and state benchmarks. The test should address

the contents that are valued and be consistent with the time available for the students to be able to complete it.

Online Assessment and Self-confidence

Self-confidence is very related to test-taking and test-making skills. To be proficient in making tests, teachers need to master the skills of preparing good tests. Besides, the process of assessment should be related to training students on online assessment and to increasing their self-confidence.

Pappas (2016) mentioned that instead of looking at mistakes and failures, learners had to understand that they were just trials to grow and learn. Each time they failed they had the chance to look back and see where they failed, and then developed the skills they needed. While some of their peers ignored past errors, self-confident learners kept moving forward and acknowledged that every online training experience brought them one step forward and did not compare themselves to others. Rather, they had the power to follow their beliefs and personal values throughout the entire online training process.

Self-confident learners see a problem and they try to solve it and jump into action. Learners brainstormed all of the methods that they could use to achieve success. These learners also seized every chance to learn and become better. They exploited all of their time, effort, and talent to overcome obstacles. As a result, they were able to develop their minds by applying them on a good basis.

To conclude, tests are an important part of the educational system that measure the student's academic progress, identify areas that need improvement, and help

students in developing essential skills such as time management and critical thinking. Nasr (2023) added that "while some may view tests as a source of stress and anxiety, they play a vital role in helping students learn and retain knowledge''. Because of the importance of having the skills to make good test items, a great responsibility is put on teachers. Therefore, they need to master the skills of making tests and at the same time to follow new methods of teaching and assessing their students confidently.

Theoretical Background

Nasr (2023) mentioned that in traditional assessment, teachers used to measure students' knowledge only by how they score in a given exam. They give students only one chance to show their competencies without discussions or classroom projects. Online assessment is a way through which teachers can improve students' learning, knowledge, beliefs, and skills. Online assessments can be behavioral, cognitive, or communicative assessments. Students may take the online assessment in the classroom or at home and this reduces their stress and increase their self-confidence. New tools are now introduced for instructors to set different types of assessments.

Teacher-made tests immediately followed by feedback are essential to student learning as they focus on the opportunities to develop students' ability to evaluate themselves, judge their performance, and improve it (Race and Smith, 2005). A well-designed test encourages active learning when the test application is innovative and engages peer and self-assessment. It can foster reflection, problem-solving, critical thinking, and self-awareness, and provide insight into the assessment process. By providing

support and being creative, students can approach assessments with a more positive outlook.

O'Keeffe (2013) stated that short answer questions (multiple choice, fill in the blank, drag and drop, short text) remain the most common forms of online -assessment. Terms such as 'collaborative assessment', 'assessment for learning', and 'cognitive' were used. Online -assessments can use automatic correction, and rely on reference answers. These allow the e-assessment designer to infer if a learner has performed correctly. However, such an assessment strategy means excluding unanticipated learning and teaching in favor of e-assessment and research that encourage standardized practices

The purpose of the Item Response Theory (IRT) is to overcome the points of weakness in classical test theory by providing a reporting scale on which the examinee's ability is independent of the particular choice of test items that are administered. Coet (2019) referred to 'item response theory' as the basis of modern-day psychometrics. E-assessment platforms rely on this body of "latent trait models" to give educators better insights into the performance of their learners, to help them formulate better test questions, and to implement more advanced test forms. Item response theory provides a useful and theoretically well-founded framework for educational measurement. It supports such activities as constructing tests, linking and equating measurements, and evaluating test bias. Item response theory (IRT), according to Linked In (2023), offers many benefits for test designers and users who want to create valid tests.

- **First,** IRT provides a more precise and meaningful *assessment of test-takers'* abilities, as it accounts for

the quality and difficulty of each item, and reduces the error and bias of the scores.

- **Second**, IRT facilitates more efficient and flexible test design and administration, as it allows for the use of item banks, adaptive testing, and score equating.
- **Third,** IRT supports more valid and fair testing practices, as it helps to identify and eliminate poorly functioning or biased items, and to ensure that the test content and difficulty match the test purpose and population.
- **Fourth**, IRT enhances the communication and interpretation of test results, as it provides more information and confidence about the test-taker's abilities, and allows for the comparison and alignment of scores across different tests.

Self-confidence is very related to test-taking and test-making skills. To be proficient in making tests, teachers need to master the skills of preparing good tests. Besides, the process of assessment should be related to training students on online assessment and to increasing their self-confidence.

Benefits of Increasing Self-Confidence

Riaz (2023) outlined these benefits as getting rid of self-doubt, increasing student motivation and self-esteem, and giving a positive outlook and a sense of trust. Self-acceptance becomes easier and social skills can be improved. Therefore, students will be more courageous and attain better performance.

However, it is not always easy to be confident in oneself, particularly if he or she is naturally self-critical or

if other people put him/her down. Thankfully, there are steps one can take to increase and maintain self-confidence in both teachers and students.

Related Previous Studies

Farrel and Leung (2004) used a new approach to online assessment based on the traditional MCQ questions to register the level of confidence of the student's response to each of the options available. The students' scores were designed to reflect their understanding of the topic. A series of experiments involving 93 students and 8 instructors were conducted. Results showed this approach has a positive contribution to both the instructor and the students.

Coniom (2009) examined the quality of tests that EFL teachers produce for their students and the effects on graduate teachers of a language testing program where participants produced objective tests, proceeding through the stages of test specification, moderation, and item analysis and test refinement. They were asked to reflect on the test development process they had experienced and to examine their test data for quality in terms of classical test statistics. Test reliability statistics varied; test means were generally acceptable although some tests were rather too easy or too difficult. In general, the number of 'good' items produced was, however, not as high as participants expected. Participants commented that the experience was revealing in terms of setting test specifications and test moderation which few had ever undertaken, noting that they had become aware that tests they had previously produced had not provided them with usable, accurate information about their students' abilities.

Hijazi (2011) investigated the use of computer-based assessment and paper-based assessment to evaluate the performance of students in grammar. A total of 209 male and female students participated in the study. The results showed significant differences in the computer-based assessment and grammar test construction.

Chua (2012) also conducted a study to investigate the effect of computer-based testing (CBT) on test performance, testing time, and testing motivation as compared to paper-pencil testing. Participants were 140. The results indicated that the CBT mode is more reliable because it reduced testing time and developed stronger self-efficacy,

Jamil, Tariq, and Shami (2012) compared computer-based (CB) and paper-based (PB) examinations. Their findings gave a positive picture of the teacher's view of e-assessment. They stated that "CB" examinations saved time and improved students' understanding. They also found that all of the personal attributes influenced the view on e-assessment. However, the qualification and the experience with technology seem to have the biggest influence.

Kuikka, Kitola, and Laakso (2014) concluded that "Learning systems are not created on teachers' needs but on the creativity of developers. An approach to teach new skills- should be promoted to facilitate teachers' entry into using the systems". Researchers concluded that "Time-saving is crucial for teachers". Teachers can no longer work by keeping their questions private but instead, cooperation between teachers is necessary.

Alzubi (2015) examined the impact of online exams on students' achievement and motivation. Fifty-eight students were assessed and the scores were statistically analyzed. Results showed significant differences between the groups on the e-exam scores and motivation scale.

Baleni (2015) used various techniques for formative assessment linked with online tools such as discussion forums and objective tests. The benefits comprised improvement of student performance, faster feedback, enhanced flexibility around the time and place of taking the test and importance in the procedure for students and teachers, and less marking time and cost saving. Results showed that the focus on formative feedback could enrich student performance.

Basaran, Yalman, and Gonen (2016) showed the importance of training pre service teachers on constructing tests. They could get immediate results and made education better. It also allowed them to save time and cost, allowed flexibility, increased the reliability by reducing mistakes, provided feedback, and collected the responses to the questions in the computer environment.

Garas and Hassan (2018) compared the use of e-exams and paper-based ones in improving students' academic performance. The participants were 78 students. Results showed that there was not any significant difference between the scores of the students taking the paper-based exam and those taking the computer-based one.

Al-Momani (2019) explored the undergraduate students' attitudes towards the use of e-assessment. She used a questionnaire on 93 undergraduate students. Results showed that those students had positive attitudes towards

assessment which could effectively assess their amount of knowledge and reduce their anxiety level. It hindered cheating and increased students' concentration levels. It enabled instructors to save their efforts and time and follow the progress of their students.

Alyahya and Almutairi (2019) measured the effect of e-tests on the achievements of middle school students. The sample was divided into an experimental group and a control one. Study tools consisted of achievement tests. The results showed statistical differences between the experimental group and the control group in the (language classification) category marks. The study concluded that teachers have to use electronic tests.

Amer (2020) explored the effectiveness of electronic exams. Three hundred and seventy 370 male and female students responded to a questionnaire. The researcher found that e-exams played an effective role in assessing students. It was found that e-exams could evaluate students' knowledge effectively and enabled instructors to save their effort and hindered cheating.

Online Assessment and Test-Making Skills

Driscoll, Jicha, and Tichavsky (2012) used a quasi-experimental design to assess differences in student performance and satisfaction across online and face-to-face (F2F) classroom settings. Students were enrolled in three online and three F2F. The researcher, course materials, and assessments were consistent between the two delivery formats. Student satisfaction and performance were compared. Results showed differences in student performance between the two settings. However, satisfaction did not significantly differ.

Elmehdi & Ibrahim (2019) studied the impact of online exams on students' performance, perceptions, attitude and feedback on online assessment in comparison to traditional in-class exams. The study answered questions on the effectiveness of online assessment to identify possible risks associated with online assessment. The results indicated that there was no clear indication of improvement. More than half of the students preferred online exams over traditional paper-and pencil based ones. The results supported the inclusion of online summative assessments in teaching and learning.

Osabutey, Senyo, and Bempong (2022), evaluated the effect of online assessment on students' academic achievement. This study used a model based on the task–technology fit theory and validated the model using a survey. Four experiments were conducted based on paper-based and online assessments. Data were analyzed using t-test. The findings showed that using online assessment had a positive effect on students' academic achievement.

Hafeez, Ajmal, and Zulfiqar (2022) conducted a study on the academic achievements of postgraduates learning by online versus face-to-face modes. The t-test analysis showed that the t-value (0.54) was not significant at 0.05. So, no significant relation has been found in the academic achievements of the students learned by online and face to face modes of learning. The reasons for no significant relation were sudden shift of learning modes from face to face to online.

A study conducted by Thathsarani, Ariyananda, Jayakody, Manoharan, Munasinghe & Rathnayake, (2023) showed that five online assessments were being used to

evaluate undergraduates' academic performance under distance learning, including online examinations, online presentations, online quizzes, case studies, and report submissions. The study proved that these variables had a significant impact on students' performance. The study also recommended that universities should implement procedures for online assessment techniques to assess the quality assurance of assessment techniques.

Kissi, Anu, Anane, and Brew (2023) explored the relationship between multiple choice (MCQ) test construction competence and the quality of MCQ tests among senior high school teachers in Ghana. In all, 157 teachers were selected from four senior high schools. Participants responded to self-designed questionnaire developed to assess teachers' MCQ construction competencies. A three-factor structure emanated from the exploratory factor analysis on teachers' multiple choice test construction competence content validity, item "options" handling, and test items assembling. Teachers in this study perceived more competence in ensuring content validity, followed by test item assembling, and handling of "options" (that is, alternatives) of the test items. The study also found serious problems with copies of multiple-choice items teachers have constructed for the students. Findings from this study provide unique and compelling evidence regarding teachers' perceived test construction competence and analysis of their multiple-choice tests.

Online Assessment and Self-Confidence

One of the most important goals in e-learning settings is to guarantee that participants reach the learning objectives. Knowing the subject is not sufficient for reaching learning

objectives. Kalici and Akliman (2019) observed that knowledge of the subject matter was insufficient. The learners had to develop an understanding of this knowledge, which was called confidence. Here the researchers assured the possibility to assess both knowledge and objectives using only two different types of multiple-choice test questions. These were: (1) a method to design questions to identify both knowledge and confidence, (2) a method to estimate knowledge and confidence from learners' answers. The researchers evaluated their method using simulations. These simulations showed that it was always possible to get reliable estimations for knowledge and confidence using approximately 100 MCQ test questions in any given subject.

Talking about the importance of raising self-confidence in online test design, Pappas (2016) argued that while the difficulty level of an online test activity may be a key factor, self-confidence in online testing was often the main factor. Being self-confident does not mean ignoring one's weaknesses and focusing only on one's strengths. Rather, self-confidence encourages learners to analyze their habits and behaviors to decide their points of weakness that are needed to improve and grow as individuals. They also need to know how to utilize their strengths in every aspect of their lives to highlight their skills.

Tripathy and Srivastava (2012) studied the effects of good performance on tests on the level of self-confidence. The researchers found that there was a relationship between students' test performance and self-confidence. The study further revealed that students with higher test performance had a higher level of self-confidence and

students with lower performance had a lower level of self-confidence.

A study by Landrun (2020) explored how students' confidence in their ability to use online learning platforms, utilize self-regulation strategies, and their confidence in their ability to learn in online classes predict both their satisfaction with and perceived usefulness of online classes. Data analyzed revealed that students' confidence to learn online was the strongest positive predictor of satisfaction and usefulness of online classes. The results revealed that exploring students' reasons for taking online classes were useful directions to pursue when assessing evaluations of online classes.

Maisona, Dwi Agus Kurniawanb, and Anggrainic, (2020) mentioned that e-assessment is an online system that makes assessments more efficient in terms of time and cost. They discussed the development, planning, use, and evaluation of e-assessment. Fourteen teachers and 108 students participated in the study using MySQL software. The results showed that students' responses to the use of self-confidence e-assessment were good. It was also obvious that e-assessment could help teachers assess students' achievement more effectively and efficiently.

Research by Phami, Hong, Chaum, and Tran (2021) aimed to discover the relationships between students' self-confidence and their language performance. Self-confidence was divided into three components which are affective confidence, behavioral confidence, and cognitive confidence. The speaking performance included vocabulary, grammar, pronunciation, fluency, coherence, comprehension, task, and content. The result showed that there were significant relationships between the two variables.

Commentary

Reviewing the above literature made it clear that few studies were conducted to investigate the effect of using online assessment for developing students' test-making skills and self-confidence. Therefore, the present study attempted to measure the effect of using an online assessment-based program for developing Faculty of Education prospective teachers' test-making skills and self-confidence. Besides, reviewing the literature on e-assessment, test-making skills, and self-confidence gave the researchers enough ideas to state the hypotheses of the study. It also revealed the importance of developing online assessments, test-making skills, and students' self-confidence in designing tests.

Context of the Problem

Based on reviewing the literature and the personal observation as faculty members who teach the methods of teaching course and as regular examiners of students' levels, the researchers could verify the current study problem. Faculty of Education prospective teachers (third year English majors) have low levels in test-making skills and they lack self-confidence.

The researchers observed third year English majors to find out what problems they were facing in test-making. They noticed that there was a lack of confidence among the students when constructing tests. The researchers also conducted a diagnostic test on test-making skills. Students' scores were unsatisfactory (see Appendix 1). Moreover, the review of literature assured the importance of using e-assessment as an independent variable because it offered benefits such as ease of marking, reduced need to read

illegible handwriting, and time-saving.   All such reasons confirmed the problem and highlighted the need for moving towards the use of online assessment as a solution to overcome the students' problems in making tests and to increase their confidence in making tests.

Statement of the problem

Based on the results of the conducted pilot study, and the literature review that showed a lack of studies that were conducted to investigate the effect of using online assessment for developing students' test-making skills and self-confidence, the researchers could verify the study problem. The statement of the present study problem could be summarized in the low level of third year English majors in test-making skills and their lack of self-confidence in making tests. Consequently, the present study tries to investigate the effect of using an online assessment-based program for developing Faculty of Education prospective teachers' (third year English majors) test-making skills and self-confidence.

Aim of the study

This study aimed at:Using an online assessment-based program for developing faculty of education prospective teachers' test-making skills and self-confidence

Hypotheses
The following hypotheses were tested

1. There would be a statistically significant difference between the study group's mean scores of test-making skills pre-posttest (favoring the post-testing).
2. There would be a statistically significant difference between the study group's mean values of the pre and post-administrations of the self-confidence scale (favoring the post-administration).

Significance

The significance of the present study emerged from the following:

1. It tried to fill in the gap in the review of literature about studies dealing with online assessment to develop Faculty of Education prospective teachers' (third year English majors) test-making skills and their self-confidence.
2. It introduced a new method of evaluation (online assessment) to meet the new educational system in Egypt and to find solutions to some of the problems related to the construction of test questions.
3. It helped the study group to practice using online assessment for the sake of saving time and effort, and for accurate marking.
4. It offered a test in test making skills.
5. It offered a self-confidence scale.

Delimitations

This study was delimited to:

1. Only the following test-making skills were included in the program:
a. designing a table of specifications
b. making Multiple choice test items
c. making completion items
d. making true false items
e. making essay test items
f. grading essay test items
2. Only thirty English Majors enrolled in the 3rd year English Department at Minia Faculty of Education participated in the program of the study. This year, the students are supposed to be evaluated in their teaching practice sessions and to practice assessment skills on solid grounds.

3. The study was conducted during the first term of the academic year 2022-2023 and lasted for ten weeks (two hours a week) with an online extension during the Methods of Teaching Course.
4. Nine sessions in test-making were prepared by the researchers.
5. The Zoom Application was used because of its availability and easiness.

Definitions

Online Assessment

Weleschuk, Dyjur, and Kelly (2019) defined online assessment as any means of evaluating student achievement, providing feedback, or moving the students forward in their learning process in fully online credit courses.

Meritt (2023) defined online assessment as an evaluation of a person's abilities, behaviors and/or characteristics.

The researchers operationally defined online assessment as a digital testing method where students can take exams, quizzes, or assessments through an internet-connected device. These assessments measure students' knowledge, skills, and understanding of a particular subject. The results are then recorded and analyzed, providing valuable feedback to students and teachers.

Test Making Skills

Veldkamp (2006) mentioned that test making or test construction, also known as test development, is a process of planning, designing, creating, administering, scoring, and statistically analyzing tests to maximize the validity of scores resulting from those tests.

Operationally defined, test-making skills are those that third year students need in constructing test items such as designing a table of specifications, planning a good test, making multiple choice test items, making completion items, making true-false items, making essay test items, and grading essay test items.

Self Confidence

Rufus (2014) asserts that self-confidence involves self-respect and having the courage to tell the truth about who you are, what you like, and what you believe.

According to Axelrod (2017), Self-confidence is also defined as individuals' skills and abilities, which they use to effectively improvise in a particular situation

Peterson (2023) mentioned that self-confidence is a process that involves how someone thinks about himself and others as well as how he functions despite challenges and uncertainties.

Self-confidence is operationally defined as someone's inner, private world and   his outer world around him.

Method

Research design

The present study adopted the pre-experimental design where one group (n=30) pre-posttest was used to assess the effect of using an online assessment-based program for developing Faculty of Education prospective teachers' (third year English majors) test-making skills and self-confidence. The study group was exposed to use the online assessment program. The material was derived from the topics of the (methodology course) that was being taught during this term. Participants were examined on how to make tests and to fill in a self-confidence scale (see Appendix 2 and Appendix 3)

Participants of the study

This study included (30) third year English majors at the Faculty of Education, Minia University. All participants were from the same regional background, age, and number of years of studying EFL. It was taken into consideration that they could deal with the internet and were interested in using it. The participation was optional.

Duration

The training began in the last week of September 2022 and ended in the second week of December of the same term (the academic year 2022-2023). The total sessions of the program were nine, two hours a week with the online training.

Role of the Instructors

The instructors' role was to acquaint students with what they were going to learn before starting the sessions to give them sufficient notion about the material. YouTube videos and related articles were posted before each session. The instructors asked stimulating questions to provoke students' thinking and learning. Class activities included a number of well-planned activities such as, brainstorming, group discussion and web searching. The researchers had to review students' assignments on the assigned Zoom application and gave them suitable feedback.

Role of the Students

The students' roles included: engaging with learning goals, providing feedback to peers and receiving feedback from instructors and peers. Their participation included asking and answering questions, and answering in-class and online questions. They were divided into groups and were logged into the Zoom application. Students were

introduced to the content and the activities. They also gave their reflections on the online assessment program.

Activities

Online activities included online assessment activities.

In- class activities included brainstorming, group work discussions and reflections

Evaluation Techniques

Short Answer Questions, MCQ questions, Completion Questions, True-False Questions and Essay Questions

Variables of the study
Independent variable

Using an online assessment program in test-making skills.

Dependent variables

1. Developing students' test-making skills
2. Developing students' self-confidence in making tests.

Instruments of the study

For the study, the researchers prepared three main instruments:

 1. A diagnostic test in test making. (Appendix 1)
 2. A test in test-making skills. (Appendix 2)
 3. A self-confidence scale. (Appendix 3)

1. Diagnostic Test

   This test aimed at assessing students test-making skills to be sure that they actually need training to avoid problems in test-making. The test consists of (40) questions as follows: 18 true-false questions, 9 MCQ items, 10 completion items, and 3 paragraph writing. Appendix (1)

2. Test Making Skills Test

a. Objective: The objective of this test was to assess the participants' level in test-making skills before and after conducting the online assessment program.

b. **Construction**: This test consisted of 40 items representing the most important objectives of the program as follows. Appendix (2)

Part 1: MCQ items on how to make Multiple-choice questions (from 1 to 10)
Part 2: Questions on how to make completion items (from 11 to 20)
Part 3: Questions on how to make true false items (from 21 to 30)
Part 4: Two paragraph writing (10 marks) (5 marks each)

The test was constructed according to a table of specifications. (see Appendix 4)

The writing part was scored according to a writing rubric. The criteria included: writing authenticity, content accordance with the title, text harmony, vocabulary selection, grammar option, and vocabulary choice. The rating scale ranged from 5 (very original) to 1 (Not original). (see Appendix 4). Two raters of nearly the same qualifications participated in scoring the paragraphs. The correlation between the two rates is high (0.68). See Table (1).

Table (1): Correlation coefficient of the scores of the two raters in the writing Part

Variable	First Rater		Second Rater		r- value	P Value
	Mean	SD	Mean	SD	0.68	0.000
Writing	4.90	0.85	5. 05	0.69		

**Correlation is significant at 0.01 level

c. **Duration**

Time taken by each student was recorded and divided by the total number of the students. Answering the test items lasted 60 minutes.

d. **Validity:** The validity of the test was determined by computing the internal consistency of each item. This was calculated by using (the Pearson correlation

formula). The Correlation coefficient ranged from 0.41 to 0.68. See Table (2).

Table (2): Internal Consistency of   Test Making Skills Test, Correlation &Alpha between Individual Question and the Total Test

Parts of the test	Skills	Correlations	Alpha
Part 1	**Answering MCQ items**	**0.68***	**0.97****
Part 2	**Answering Completion items**	**0.51***	**0.82****
Part 3	**Answering True / False items**	**0.45***	**0.56***
Part 4	**Answering Essay items**	**0.41***	**0.62****

**Correlation is significant at the 0.01 level (2-tailed).
*Correlation is significant at the 0.05 level (2-tailed).

e. The Reliability of the test: The researchers used the Alpha Cronbach formula. As shown in table (2), the reliability coefficient ranged from (0.56) to (0.97). It can be concluded that the test has an acceptable reliability level**.** The reliability coefficient of this test is considered within the acceptable range.

f. Item Analysis   Responses to individual items were analyzed to determine the item difficulty index which ranged from 0.35 to 0.50. Hence, the difficulty index of the items is acceptable. Item discrimination ranged between 0.40 and 0.71

g. Scoring: One point is given for each test item. The writing part was scored by two raters according to a writing rubric. The total score of this test is (40).

Piloting the Test twenty students from third year English majors were randomly selected. Piloting helped to correct unclear and ambiguous items. It helped also to determine whether the items were functioning for use in the main study or not. Content validity was determined by consulting (7) EFL staff members.

3. Self-Confidence Scale (Developed by the researchers)

a. Objective: A self-confidence scale was developed by the researchers to measure the study group's level of self-confidence before and after administering the online assessment program.

b. Construction: The scale consisted of thirty statements divided into three main domains Affective, Behavioral, and Cognitive with ten statements each. Appendix (3)

c. Duration: Thirty minutes were devoted to responding to the scale.

d. Content Validity: Seven TEFL staff members approved the content validity of the scale and its suitability for the group. They also approved the domains and confirmed the suitability of the scale to assess students' self-confidence. They stated that the items were inclusive, easy to respond to, varied, and focused. Their suggestions were taken into consideration. The total score on the scale is 150. The rating scale ranged from 5 to 1, respectively from (Strongly Agree, Agree, Undecided, Disagree, Strongly Disagree). The study group students were required to indicate their opinions in each statement.

e. The internal consistency: The correlation between the score of each item and the total score of the scale ranged from (0. 45) to (0.89). This indicates that the scale has a high degree of validity. See table (3).

Table (3): **Internal consistency of the Self-Confidence Scale Correlation Between each Domain and the Total Score (Validity)**

Dimension	Correlation	No. of items
1. **Affective confidence**	**0.45****	**10**
2. **Behavioral confidence**	**0.48****	**10**
3. **Cognitive confidence**	**0.89****	**10**

** Significant at 0.01   total score = 150

The reliability coefficients of the scale are (0.45, 0.84, and 0.89) for the (affective, behavioral, and cognitive confidence), successively This shows that the self-confidence scale has a high degree of reliability.

Piloting the scale

A pilot study was conducted to estimate the validity and the reliability of the self-confidence scale. A group of twenty third year English majors were randomly selected. Piloting helped to correct unclear and ambiguous items. It helped to determine if the items in the scale were suitable for use. Content Validity was determined by consulting (7) TEFL staff members.

Timing

Timing the scale was computed by counting the time taken by each student divided by the whole number of the students to take the average.

Experimental Procedures
Pre-Testing

Students were pre tested so as to measure their performance on the test making test and the self-confidence scale before conducting the online assessment program and to identify the degree of improvement in both instruments. The researchers explained the purposes of the program and students were enrolled into Zoom Application.

The Experimentation

The study group were exposed to nine sessions on test making skills two hours a week with an online extension. They were divided into groups. Before each session the researchers posted the material on the predetermined Zoom application. Students were enabled to see the material online. They were given homework assignments to be ready for classroom activities and discussions. During the course of training, the study group students were involved in a number of in class and online activities.

Steps in constructing the online assessment program:
1. Reviewing the literature related to test-making skills and self-confidence.

2. Preparing a list of the test-making skills.
3. Evaluating the list by a panel of (7) TEFL experts.
4. Stating the main objectives of the program and having them evaluated.
5. The whole program was evaluated by the same panel to judge the stating of the items, verification of the content, and whether the activities were appropriate to the group of study.

Material

The online assessment program aimed at achieving the objectives of the study. The program consists of nine sessions each having a number of behavioral objectives, different activities and ends with evaluation questions of different types   to assess the students' performance in test making skills.

Content of the program

The program consists of the following sessions:

Session (1) An orientation on the characteristics of a good test and designing a table of specifications (lasted for two weeks)

Session (2) How to write a good test

Session (3) Planning the Test

Session (4) Constructing multiple-choice test items

Session (5) Advantages and disadvantages of Multiple Choice Questions

Session (6) Constructing True-False Test Items

Session (7) Constructing Completion or Fill-in-the-Blank Test Items

Session (8) Constructing Essay Test Items

Session (9) Grading essay test items

Procedures of using the Zoom Application:

The ZOOM Application really was an amazing help as far as the students were able to attend meetings,

discussions, appointments, etc... without having to actually travel somewhere and be physically present to take care of important conversations. It had helped save lots of time, energy, and   money.

To join a Zoom meeting on the desktop client, students had to:

1. Open the Zoom desktop client.
2. Join a meeting using one of these methods:

- **Click Join a Meeting** if they wanted to join a meeting without signing in.
- If they wanted to join a meeting by signing in They had to:

1. Sign in to the Zoom desktop client.
2. Click the **Home** tab.

- Click **Join.**

Join

3. Enter the meeting ID and the display name.
- If they were signed in, they could change their names if they did not want their default names to appear.
- If they were not signed in, they could enter a display name.
4. Selected if they would like to connect audio and/or video.
5. They were asked to Click **Join**.

 Steps in implementing the online assessment program:
- Each session started with face-to-face interaction to arouse participants' interest in the program.

- The researchers made an overview of the content of the sessions.
- The researchers made sure that each one of the participants had a Gmail account.
- They accessed the topic online through the Zoom Application.
- Each online session lasted approximately two hours.
- The participants had to register for the Online zoom meeting. They registered the first and the last name and the email address.
- Once the group started the online assessment, he/she was not allowed to stop halfway through.
- The participants then were asked to proceed through the assessment test and the scale.
- They completed the online assessment by the application deadline.
- Cheating or talking to one of the friends while taking the exam was prevented.
- Feedback was given immediately after the they finished the testing.

Post Testing

At the end of the program, students were post-tested in test making and the self-confidence scale. They were asked to write their reflections on the online assessment program. Data were treated statistically and the findings are described below.

Results

This study explored the effect of an online assessment program on the development of the study group's performance on test-making skills and self-confidence scale. The "t-test" was utilized for the analysis of data. Scores on the pre-post performances were analyzed and compared.

Hypothesis One

Hypothesis one predicted that there would be a statistically significant difference between the study group's mean scores of test-making skills pre-posttest (favoring the post-testing). Analysis of data using t-test showed that students post-testing was better. As their means of scores were higher and statistically significant compared to the pre-administration. (See table 4)

Table (4): **Means, Standard Deviations, t-values, and Cohen's d and the Difference between Mean scores obtained by the Study Groups' Pre-Post Test Making Test**

Test		Mean	No.	SD	t- value	DF	Cohen's d	Sig.
Test Making	**Pre**	**17.17**	**30**	**1.68**	**55.10****	**29**	**0.78**	**Sig.**
	Post	**21.20**		**2.10**				

Significant at (0.001) level   **Maximum score =40

Hypothesis Two

Hypothesis two predicted that there would be a statistically significant difference between the study group's mean scores of the pre-post administrations of the self-conference scale (favoring the post-administration). Statistical analysis in table (5) shows that this hypothesis was accepted as the students" post-testing surpassed their pre-testing and the 't' value is (43.225) and this value was significant at 0.01.

Results also showed that students scored better in post-performance as the t-value of the affective domain is (11.91) while the t-value of the behavioral domain is (13.36.) and that of the cognitive domain is (12.65), and the total is (21.50). The t-value of the whole scale is (21.50)

Table (5):Means, Standard Deviations, t-values, and Cohen's d and the Difference between Mean scores obtained by the Study Groups' Pre-Post Testing on The Self Confidence Scale (N=30)

Variable		Mean	No.	Std. Deviation	t- value	D.F	Cohen's d	Sig.
Affective	Pre	65.90	30	18.23	11.91**		0.78	*
	Post	71.70		19.04		9		
Behavioral	Pre	67.40		15.95	13.36**		0.72	*
	Post	70.00		17.03		٩		
Cognitive	Pre	75.70		20.41	12.65**		0.58	*
	Post	81.80		20.44		9		
Total	Pre	69.67		18.18	21.50**		0.67	
	Post	74.50		18.98		29		*

**** Significant at 0.01 level**

Discussion.

The present study was conducted to investigate the effect of using an online assessment-based program for developing Faculty of Education prospective teachers' (third year English majors) test-making skills and their self-confidence in making tests. Students' scores on the pretest of the test-making test and self-confidence scale were unsatisfactory. Before implementing the program, the diagnostic test showed that they were in bad need of improving their test-taking skills and self-confidence. Therefore, training through an online assessment program gave them enough opportunity to fill in the gap in their knowledge of constructing items of different question types (multiple choice- true false-completion items and essay writing).

At the beginning of training, the researchers made clear the objectives of the online assessment-based program of test making skills and acquainted them of the necessity of shifting to online assessment to cope with the system of evaluation followed in the Egyptian Educational institutions including the university level especially at the

time of Corona pandemic. The researchers used Zoom Application. It is a video conferencing platform that can be used through a computer desktop or mobile app, and allows users to connect online for video conference meetings, webinars and live chat. During the Covid19 crisis, Zoom was looked at as a surge in popularity, with millions of people using it to stay in touch with others, and to encourage students to participate. Students were instructed in how to engage in online discussions and make reflections on classroom activities.

The Zoom application, according to Reisinger (2022), enables educators to directly comment on students' screen share. This feature is convenient as instructors can interfere and begin marking up the screen in response to the work that students share. In Zoom sessions, the researchers sent the link to a scheduled Zoom session to students. Students could then easily join the Zoom session without signing in with a registered Zoom account.

In the present study the researchers sought to measure the participants' skills in constructing MCQ items, completion items, true-false items, and paragraph writing. It could be noted from the results that students' mean scores in posttest making (21.20) exceeded that in the pre-testing. The effect size was found to be (0.78) and this value is much satisfactory to the researchers. This value refers to the high effect of using the online assessment program on students' test making skills.

These high gains obtained by the study group on post measures could be attributed to the use of the online assessment program in test making using ZOOM application. The content of the online assessment-based

program was based on some test making skills such as constructing multiple choice test items, true-false test items, completion or fill-in-the-blanks test items, essay test items, and grading essay test items. They were based on "the Methods of Teaching course" being taught to third year English majors

The material learned could arouse the students' interest and achieve a high degree of student engagement during the in-class and online activities. Being closely related to the objectives of the online assessment-based program and being well planned, the activities played an important role in improving students' performance.

Results obtained are most emphasized by writers and research workers such as Chua (2012) who indicated that the Computer Based Testing mode is more reliable than that of paper and pencil. However, the results of the present study contradicted with those of Hafeez, Ajmal, and Zulfiqar (2022) who found no statistical differences between online and face to face modes of learning.

In order to understand the role of the researchers during the online assessment sessions, it is necessary to describe the role of the instructors. They monitored and assessed the online work developed in each group or individual during the implementation of the program in order to improve their test-making skills and increase their self-confidence in constructing test items. In this assessment, the active role of the students is quite relevant, since they were interested in and encouraged to participate actively in all sessions. Individual and group feedback: was done according to the observation of the participation of each student within the group during group discussion.

The researchers provided students with an awareness of their level of performance in test-making skills, Consequently, they helped them to be self-confident. Therefore, online - assessment became a very valuable resource to foster students' confidence in themselves and it became necessary for college English courses. These results of the current study correspond to Landrun's (2020) study which explored how students' confidence in their ability to use online learning platforms, utilize self-regulation strategies, and their confidence in their ability to learn in online classes predict both their satisfaction with and perceived usefulness of online classes. Students' confidence to learn online was the strongest positive predictor of satisfaction and usefulness of online classes.

The results of the current study about the positive effect of online assessment on the participants' self-confidence were also assured by Pappas' results (2016) who emphasized that self-confidence is essential in online training, as it allows learners to achieve their real potential and pursue bigger and better goals. Maisona, et.al. (2020) also showed that students' responses to self-confidence were good. The different domains of the self-confidence scale (affective, behavioral, and cognitive) were developed in different degrees as the behavioral domain (13.36) was higher than the cognitive domain (12.65) and the affective domain (11.91).

To conclude, the present study outperformed previous research by providing a more insight on online assessment of students' test-making skills since the majority of previous studies have offered contradictory findings. In addition, the study moved beyond existing research by complementing assessment results with the views of

students in evaluating the impact of online assessment on their performance. Second, the study presented a research model that explained how to combine technology and assessment tasks in a way that influenced students' test making skills and self confidence in their ability to construct tests.

Students' Reflections

Students were asked to give their reflections on the whole experiment.

The following are examples of these reflections:

- *"This course made me learn how to construct MCQ, true false, completion, and essay questions".*
- *"This course is so beneficial because we learned the characteristics of a good test".*
- *"Zoom application gave us the chance to receive tasks and see the material of the next lecture".*
- *"The instructors were really helpful and active".*
- *" The online activities helped me to practice making questions of different types".*
- *"I can design a table of specifications".*

Implications

The significant gains obtained by the participants of the study group on post-testing could be attributed to the use of the online assessment program which is mainly based on the idea of developing some test-making skills and students' self-confidence in making these tests.

Some factors may have helped to enhance the positive effect of the program on developing students' test-making skills and self-confidence in making tests such as the in-class and online activities, the discussions between groups, the material presented in an organized way, and the interest and enjoyment of students and the new modes.

Challenges

The researchers encountered some challenges throughout the implementation of the online assessment-based program. These include:

1. Being reluctant at the beginning of the program lest it should affect the time allotted to the other subjects
2. Some students were not willing to participate because they did not have enough computer skills.
3. Computers in the lab were not enough and some of them were not working.
4. Some of them were unable to attend the class.
5. Some of them did not have personal computers.

To overcome such challenges, the researchers did the following:

1. Explaining the importance of the online assessment-based program, especially at the time of the COVID-19 pandemic, and the necessity of using the online assessment.
2. Every two students shared the same computer and some of them relied on their mobiles.
3. The researchers taught the students how to make personal accounts and how to make user names.
4. Conducting Face-to-face discussions to give the students a good chance to get the information they need before they start.

Conclusion

Effective teachers recognize the importance of engaging their students in learning. This is why it is necessary to implement relevant technologies for assessments to make learning applicable to students, who are becoming more digital and competence-based to meet the demands of future jobs. In this regard, teacher training is crucial to meet this challenge.

Test-making skills are an urgent requirement for all teachers who are continually required to prepare questions of different types to assess the performance of their students. Online assessment has become an effective tool in the e-learning sector in recent years. It has developed into a very necessary element of modern practices in education as an outcome of the progress of digital technology and the increasing desire for distant learning. It is much quicker to mark online assessments and students welcome receiving results quickly. With auto-scorable questions, students can attain immediate feedback as well as ongoing feedback from their test results. The provision of immediate feedback through online assessment is essential to make students aware of their responses and to avoid the anxiety of traditional pen-and-paper exams which take days and weeks to get the marks. For some students who are struggling with specific subjects or topics, this can prove to be challenging and frustrating. Self-directed learning is encouraged through students' ability to self-learn.

To conclude, test-making skills can be enhanced in case of supplementing them with online assessment tools which enable teachers to easily evaluate students' learning progress. The option to test online is much more environmentally friendly and can enhance students' self-confidence.

Recommendations

In the light of the results obtained in the present study, a number of recommendations could be drawn:

1. Instructors are recommended to use online tests to assess the courses.

2. Developing online assessment has to be one of the essential main skills in the teaching-learning process.
3. Immediate feedback is necessary to demonstrate instant results.
4. Paying more attention to the methods and techniques that encourage the engagement of the students in the learning process.
5. The online assessment is recommended to be used in other types of questions other than those used in the present study.
6. Pre and in-service teachers should master the computer skills in order to functionalize them in other subjects.
7. EFL teacher preparation program designers are recommended to encourage the use of online assessment.
8. Paper and pencil exams should be replaced by online assessment means.
9. Self-confidence is a prerequisite to succeed in all fields.

Suggestions for Further Research

1. Investigating the effect of the online assessment to reduce test anxiety.
2. Investigating gender differences in using the new means of technology.
3. Investigating students' and instructors' attitudes toward computerized tests.
4. Investigating the effect of using electronic exams on students' test-taking skills.
5. Investigating online summative assessment and its impact on students' performance in exams.

References

- Agu, N. N., Onyekuba, C., and Anyichie, C. A. (2013). Measuring teachers' competencies in constructing classroom-based tests in Nigerian secondary schools: need for a test construction skill inventory. Educ. Res. Rev. 8, 431–439. doi: 10.5897/ERR12.219
- Al- Khayat, M. (2017) Students and Instructors Attitudes Toward Computerized Tests in Business Faculty at the Main Campus of Al-Blaqa Applied University. The Journal of Al-Najah University for Research, 31(11), 2041-2072.
- Al-Momani, O. (2019). The attitudes of undergraduate students towards using e-exams for assessment in Jordan. British Journal of Education, 7(9), 14-28.
- AL Sadoon, H. (2017). Students' perceptions of e-assessment at Saudi Electronic University. Turkish Online Journal of Educational Technology, 16(1), 147-153.
- Alyahya, D. & Almutairi, N. (2019). The Impact of Electronic Tests on Students' Performance Assessment. International Education Studies.12(5).109.
- Amedahe, F. K., and Asamoah-Gyimah, K. (2016). Introduction to measurement and evaluation (7th ed.). Cape Coast: Hampton Press.
- Amer, M. (2020). Effectiveness of Using Electronic Exams in Assessment in Saudi Universities: Empirical Study. *International Journal of Educational Technology and Learning. 8(*2*)*, 61-69
- Appiah, M., & van Tonder, F. (2018). E-assessment in higher education: A review. *International Journal of Busine*
- Alzu'bi, M. (2015). The effect of using electronic exams on students' achievement and test takers' motivation in an English 101 course. In The Proceedings of Conference of the *International Journal of Arts & Sciences,* 207-215.
- Axelrod, R. H. (2017). Leadership and self-confidence. *Leadership Today,* 297–313. https://doi.org/10.1007/978-3-319-31036-7_17
- Baleni, Z. G. (2015). Online formative assessment in higher education: Its pros and cons. *EJEL, 13*(4)
- Basaran, B., Yalman, M., & Gonen, S. (2016). Attitude scale towards web-based examination system (MOODLE)–Validity and

reliability study. *Educational Research and Reviews, 11(*17*),*1641-1649. https://doi.org/10.5897/err2016.2850

- Black, P., and Wiliam, D. (2010). Inside the black box: raising standards Through classroom assessment. Phi Delta Kappan 92, 81–90. doi:10.1177/003172171009200119
- Chua (2012). Effects of computer-based testing on test performance and testing motivation. *Computers in Human Behavior,28*(5), doi. 10.1016/j.chb.2012.03.020
- Colman**,** H. (2022). 9 Ways to Assess Student Learning Online**.** Inspiring *World Wide Journal of Multidisciplinary Research and Development*; *8*(5), 68-74
- Coet, N. (2019)."An Inspera Primer on Item Response Theory, the engine of e- assessment. Available at https://www.inspera. com/blog/a- *gentle-introduction-to-item- response theory-the-modern- workhorse-of-e-assessment*.
- Coniom, D. (2009). Investigating the quality of teacher-produced tests for EFL students and the effects of training in test development principles and practices on improving test quality *System, 37*(2), 226-242
- Conrad, D. and Openo, J. (2018). *Assessment Strategies for Online Learning Engagement and Authenticity.* Copyright, 2018 Published by AU Press,Athabasca University 1200, 10011 – 109 Street, Edmonton, AB T5J 3S8
- Damavandi, A., Mahyuddin., Elias. H., Daud, S., & Shabani, J. (2011). Academic achievement of students with different learning styles. *International Journal of Psychological Studies, 3*(2), 186-192.
- El Mahdi, H.M. & Ibrahem .M. (2019). Online Summative Assessment and Its Impact on Students' Academic Performance, Perception and Attitude Towards Online Exams: University of Sharjah Study Case. Conference paper.
- Farrell, M.G, and Leung,Y.K.(2004). Innovative Online Assessment Using Confidence Measurement   *Education and*

Information Technology, 9(1):5-19 DOI:10.1023/B:EAIT. 00000 24258.29560.3c

- Fives, H. (2013). Classroom test construction: the power of a table of specifications DOI: https://doi.org/10.7275/cztt-7109

- Garas, S., & Hassan, M. (2018). Student performance on computer-based tests versus paper-based tests in introductory financial accounting: UAE evidence.*Academy of Accounting and Financial Studies Journal, 22(2),*1-14

- Gareis, R. C., and Grant, W. L. (2015). Teacher-made ssessments: How to connect curriculum, instruction, and student learning (2nd ed.). NewYork: Routledge.

- García-Peñalvo, F.J., Corell, A., Abella-García, V., Grande-de-Prado, M. (2021).Recommendations for Mandatory Online Assessment in Higher Education

- During the COVID-19 Pandemic. In: Burgos, D., Tlili, A., Tabacco, A. (eds) Radical Solutions for Education in a Crisis Context. *Lecture Notes in Educational Technology. Springer*, Singapore. https://doi.org/10.1007/978-981-15-7869-4_6

- Hafeez, M., Ajmal, F., Zulfiqar, Z. (2011). Assessment of Students; Academic Achievement in Online and Face to Face Learning in English Education. *Journal of Technology and Science Education JOTSE, 202212(1): 259-273*

- Harris, J., & Al-Bataineh, A. (2015). One-to-one Technology and its Effect on Student Academic Achievement and Motivation. In *Global Learn* 579-584. Association for the Advancement of Computing in Education (AACE).

- Hijazi, D. (2011). Comparison of Students' Performance in English GrammarUsing Cell Phone-Based, Computer-Based and Paper-Based Testing.*European Journal of Soil Science, 20*(4), 613-623.

- Jamil, M., Tariq, R. H., and Shami, P. A. (2012). Computer-based vs Paper based examinations: Perceptions of university teachers. *Turkish. Online Journal of Educational Technology-TOJET, 11(*4*), 371–381*

- JISC. (2007). Effective practice with e-assessment. *HEFCE*. Available at http://www.jisc.ac.uk/media/documents/theme

- Guskey, T. R., and Jung, L. A. (2013). Answer to essential questions about standards, assess ents, grading, & reporting. Thousand Oaks, CA Corwin.Assessment of knowledge

- Kaleci, D. and Akleman, E. (2019). Assessment of knowledge and Confidence for E-learning. *World Journal on Educational Technology: CurrentIssues. 11*(1),104-115.

- Kissi, P., Anu D.B., Anane R. K., Brew A. (2023) Teachers' test construction competencies in the examination-oriented educational system: Exploring teachers' multiple-choice test construction competence. Assessment,Testing, and Applied Measurement 8 https://doi.org/10.3389/feduc. 2023.1154592

- Kim C.S. (2005). Work in progress – Mobile computer-based Classroom assessment. Proceedings of 35th ASEE/IEEE *Frontiers in Education Conference, October* 19 – 22, Indianapolis. Retrieved April 9, 2020, from http://ieeexplore.ieee.org/iel5/ 10731/ 33854/01611904.pdf?ar number=1611904

- Kinyua, K., and Okunya, L. O. (2014). Validity and reliability of teacher-made tests: case study of year 11 physics in Nyahururu District of Kenya. Afr.Educ. Res. J. 2, 61–71.

- Kuikka, M., Kitola, M., and Laakso, M.-J. (2014). Challenges when introducing electronic *exam. Research in Learning Technology,22. Kuppers, B. and Schroeder, U.* (2)

- Landrum, B. (2020). Examining students' confidence to learn online, self-regulation skills and perceptions of satisfaction and usefulness of online classes. *Online Learning, 24*(3), 128-146.

- Linked in, (2023). How do you use item response theory to design fair and valid tests? Available at: https://www.linkedin.com/ advice/0/how- do-you-use-item-response-theory-design.

- Millsap, B.S., & Claudette M. (2000). *Comparison of Computer Testing versus Traditional Paper and Pencil Testing* (Published Ph.D. Dissertation) at https://digital.library.unt.edu/ark:/ 67531/ metadc2621/m2/1/high_res_d/Dissertation.pdf

- Maisona, Dwi Agus Kurniawanb, Anggrainic L.,(2020). Self-Confidence:Electronic Based Assessment *International Journal of Innovation,Creativity and Change.* www.ijicc.net, *13*(8)

- Neendoor , S. (2023). What is Online Assessment: Exploring the Future of Online Assessments. Retrieved from https://www. hurix.com/

- O'Keeffe,   Cormac (2013) *E-assessment   practices   and theories.* In: Association for Learning Technology, 2013-09-102013-09-12.
  Osabutey,   E.L., Senyo,   P.K. and Bempong,   B.F. (2022), "Evaluating the potential impact of online assessment on students' Academic performance", *Information   Technology   & People*, Vol. ahead-of print No. ahead-of-print.

- Pappas, C. (2016). The Importance Of Raising Self-Confidence In Online Training. Available at: file:///C:/Users/DELL/Desktop/ The%20Importance%20Of%20Raising%20Self- Confidence%20In% 20Online%20Train

- Pereira D, Flores MA, Niklasson L. (2016) Assessment revisited: a review of research in assessment and evaluation in higher education. Assess Eval High Educ; *41*(7):1008–32.

- Peterson, T.J. (2023). What Is Self-Confidence? Retrieved from: https://www.healthyplace.com/self-help/self-confidence/what-is-self-confidence

- Phami, A.T., Hong, H.T., Chaum,T., &Tran, P. (2021) " The relationships between students' self-confidence and their English-speaking Performance: A case study of English major students at a private university in Vietnam.*European Journal of Education Studies*, *8*(9).

- Race, P. Brown, S. and Smith, B. (2005) *500 Tips on assessment: 2nd*edition, London: Routledge

- Reisinger, D. (2022). How to use the Zoom app on iPhone, Android, Mac and Windows**.** Available at: ttps://www. tomsguide.com/news/how-to-use-zoom

- Riaz, S. (2023).12 benefits of increasing your self-confidence. retrieved4/10/2023.
- Rovai, A. P. (2000). Online and traditional assessments: what is the difference? *The Internet and Higher Education*, *3*(3), 141-151.
- Rufus, A. (2014). Unworthy: How to Stop Hating Yourself. New York: Jeremy P. Tarcher/Penguin
- Sharma, N. K. (1993). How confident are humans about their self-assessment? *Special issue : Psychoeducational assessment. Psychological Studies, 38, 150-156.*
- Sharma, N. (2023). Online Assessment Test: Benefits Of Online Assessment Test   Over the Offline Assessment Test. Available at:
- https://www.hurix.com/online-assessment-test-benefits-of-online-assessment- test-over-the-offline-assessment-test/
- Thathsarani, H., Ar. yananda, D.K., Jayakody, C. Manoharan, K., Munasinghe,A.A.S.N. & Rathnayake, N. (2023). How Successful the online assessment techniques in distance learning have been, in contributing to academic achievements of management undergraduates? *Education Information technologies.* 1-25 https://doi. org/10.1007/s10639- 023-11715-7
- Tripathy, M., & Srivastava, S. K. (2012). To study the effect of academic *achievement on the level of self–confidence. International Journal of Yoga and Allied Sciences, 1*(1), *33-45.*
- Tremblay K, Lalancette D, Roseveare D. (2012). Assessment of higher education learning outcomes (AHELO). Feasibility study report volume 1. Design and implementation. Paris: OECD; 2012**.** Available at: http://www.oecd.org/ education/skills-beyond-school/AHELOFSReportVolume1. pdf [last accessed 15 July 2020].
- Veldkamp, B. P. (2006) Optimal Test Construction. in Encyclopedia of Social Measurement
- Weleschuk, A. Dyjur, P. & Kelly, P. (2019). *Online assessment in*
- *higher education.*   Taylor Institute for Teaching and Learning 434 Collegiate Blvd University of Calgary,

- Welford, M. (2013). The Power of Self-compassion: Using Compassion-focused Therapy to End Self-Criticism and Build Self-confidence.Oakland: New Harbinger Publications, Inc.
- Woods, S., Walsh, B., & Cannon, T. (2020) Mini-SIPS 1.0, an abbreviated clinical version of the Structured Interview for Psychosis-risk Syndromes *Journal of Neuroscience Methods*: www.elsevier.com/locate/jneumeth

✳✳✳