Celebes Journal of Language Studies Vol. 2, No. 1 June 2022
ISSN: 2776-7493 (Media Cetak)
ISSN: 2808-2079 (Media Online)
Published by. HAR PRESS Indonesia

Analyzing the Efficiency of E-Assessment of EAP Courses amid COVID-19 in Bangladesh

Nazia Masood
nazia.masood@g.bracu.ac.bd
Student, MA in TESOL Program
Brac Institute of Languages
Brac University, Bangladesh

Faheem Hasan Shahed
faheem.shahed@bracu.ac.bd
Associate Professor, Brac Institute of Languages
Brac University, Bangladesh

Abstract

In industrialized countries, conducting online classes has been a common phenomenon. However, it became quite challenging to arrange virtual classes for a developing country like Bangladesh during the COVID-19pandemic. Teachers at all levels had to cope with the situation to make a drastic shift from offline to online classes in a short period of time. Although teachers could successfully take virtual classes, concerns about the efficacy of e-assessment remained since assessments must depict the actual scenario of students' learning. This mixed-method study tried to figure out the efficiency of e-assessment of EAP (English for Academic Purposes) courses. To facilitate, 30 students and 4 teachers of privately-run universities in Dhaka virtually took part in this research. The findings reveal that the students could find validity and reliability in the e-assessment, but technical glitches made the e-assessments impractical. On the contrary, teacher participants could only ensure the presence of validity. At the same time, they could apply the concept of zone of proximal development by Vygotsky and comprehensible input hypothesis by Krashen.

Keywords: *E-assessment, EAP course, validity, reliability, practicality.*

INTRODUCTION

In the 20th century, classroom assessment was thought to be a process that gave an index of students' learning by evaluating their understanding of the contents and judging their performance depending on what teachers had taught (Sangle et al., 2020). Assessment was regarded an important aspect in tertiary education to determine students' language abilities, knowledge, and a tool to determine students' progress in meeting the course's objectives (Stödberg, 2012). Prior to the COVID-19 pandemic, tertiary level evaluations could be performed both online and in person. Assessments comprised pen-paper midterms, finals, presentations, quizzes, group/pair assignments, and project-based tasks, among others. The

majority of them were conducted in face-to-face (F2F) classes, but others were made online, including both blended and F2F assessments.

The scenario, however, completely changed during pandemic period, and both students and instructors had to adjust to the new normal, a term created by American public speaker and author Charles Eisenstein. He voiced, 'We sense that "normal" isn't returning, that we are being born into a new normal: a new society, a new relationship to the land, a new experience of being human," (as cited in Tumapon, 2020). Teaching, learning, and assessment were done virtually throughout this new normal phase.

Definition of Key Terms

E-Assessment: According to Chen and Tseng (2019, p. 2), e-assessment is the use of "digital learning technology to manage and provide various forms of assessment to test learners' knowledge and abilities virtually."

Validity: Validity refers to the character which determines to what extent an assessment measures relevant content (Coombe et al., 2009).

Reliability: Reliability is the stability of assessment scores assessed at various times (Huges, 2003).

Practicality: Teachers and learners can use practicality to complete the "activities of preparing, administering, scoring, and applying their assessments" (Coombe, 2018, p. 34).

Background & Context

Approximately, 1.5 billion students in 190 countries (UNICEF, 2020) seemed unable to attend on-campus classes due to the pandemic. When the first three instances of COVID-19 were detected on March 8, 2020 (IEDCR, 2020), Bangladesh government decided to close all educational institutions, following the instances of other developed countries. As a result, from March 17, 2020, until the completion of this research, all campuses were closed (Dutta & Smita, 2020). As a consequence, students from primary to tertiary level were forced to stay at homes rather than to attend on-campus sessions; they were required to continue their studies remotely. It was then necessary to determine whether or not e-assessments could accurately assess students' full potential and provide an accurate picture of their learning. Educational experts all over the world were concerned as some students had a tendency to adopt unethical means to receive good scores in the online exam.

Regarding this issue, Mortuza (2021) narrated how our education was in crisis as students tended to take advantage of e-assessment and tried to acquire good grades through unfair means like plagiarism. Consequently, the feasibility of using e-assessment to track students' actual learning might be questioned. It was thus necessary to determine whether the scenario was the same in all tertiary courses. Teachers were also encouraged to use e-assessments to ensure students' learning and skill development. To accomplish this, they needed to develop tasks and activities that were valid, reliable, and practical to current e-assessment practices. As a result, another important question in this regard was whether or not e-assessments possessed these qualities. Overall, it was necessary to investigate if e-assessment could accurately reflect the actual situation of students' learning, as the transition from offline to online courses was inadequate, and demanded effective evaluation.

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Based on current literature review, it was evident that there were few studies that addressed the efficacy of e-assessment in Bangladesh. In one of their recent studies, Huda et al. (2020) shed light on this topic by conducting an inter-university study where randomly chosen students participated. Nevertheless, the current paper investigated the perspectives of the prominent stakeholders (both students and teachers) who were directly involved in teaching-learning process. Hence, this study focused on the following research questions:

1. What is the perception of the students of EAP courses regarding the effectiveness of e-assessment?
2. What is the perception of the teachers of EAP courses regarding the effectiveness of e-assessment?

The findings of the research would give academics with useful insights and incentive to perform further studies in the same subject, taking into account different educational levels. Based on the findings, practical precautions for a better learning experience might be taken. Not only that, but also the results of this study would help determine whether or not e-assessment should be continued after the pandemic.

Method

Research Design

Since the study's goal was to figure out the perspectives of students and teachers, a qualitative method was deemed ideal. The teacher participants cooperated and shared their experiences by responding to open-ended questions during semi-structured interviews. By examining the experiences shared by the teacher participants, the researchers could compare and assess novel circumstances (Patton, 2005). In contrast, the researchers had to struggle as student participants were reluctant to answer the open-ended questions virtually. Therefore, quantitative approach had to be followed by designing close-ended questions with numbers (on a scale of 1-4) for determining students' perceptions, and then measure the percentages and mean score as investigation into a social or human problem could be done by using variables, measuring with numbers, and evaluating with statistical techniques as per Creswell (2014). Hence, the combination of qualitative and quantitative research made the study a mixed-method one.

Sampling

A total of thirty students and four teachers from four randomly chosen private universities participated in this study. To make the study concise and focused, the researchers chose those students and teachers who had completed at least one EAP course online so that they could properly share their experiences. The study comprised 23 male and 7 female students aged between 20-23 years, all of them being first-year students. Three male teachers and one female teacher consented to participate in the virtual interview session. A detailed profile of the teacher participants is mentioned in the following table:

Table 1: Detailed profile of teacher participants

Name of Teachers	Gender	Number of years active in teaching profession	Highest level of educational qualification
T1	Female	11.5	MA in English

T2	Male	7	MA in English
T3	Male	9	MA in English
T4	Male	11	MA in English

Data Collection Instruments

The researchers chose survey questionnaires (both open-ended and closed-ended) and semi-structured interviews as instruments for this study. To determine the answer to the first research question, the student participants were given a questionnaire with ten closed-ended questions. The student participants selected answers from the given options in a Google Form from the closed-ended questions. Further, four generic questions were also included in the survey questionnaire to obtain information about the participants' profiles. One prominent advantage was, participants got no chance to skip questions as it was mandatory to answer all the questions. The semi-structured interview with the teacher participants was conducted using six open-ended questions that allowed the participants to explain their experiences and opinions. This provided the responses to the second research question.

Data Collection Procedure

The data collection process was held virtually due to the pandemic. After selecting the teacher participants who were willing to take part in the survey, appointments were fixed for their interviews. Subsequently, the interview questions, a Google/Zoom Meet link, and the interview schedules (based on the interviewees' preferences) were mailed to them. They were assured that their identities would be kept private and that all information would only be used for research purposes. The interview sessions were held on the specified days, and the sessions were recorded with the participants' permission. However, the interview session for one teacher participant took place via WhatsApp. The researchers took notes on the responses because recording was not permitted due to the administrative regulations of the participant's institution. In addition to this, for maintaining authenticity and individuality of the student participants' responses, the researchers took assistance from their course teachers. The researchers mailed the course teachers a link of the Google Form. The URL was shared with the students later during class time, and responses were collected right away.

Data Analysis Procedure

The data analysis process was broken down into numerous parts. Google Form automatically inserted students' responses into a Microsoft Excel Sheet. Then, the mean score and response percentages were manually determined using the Likert scale to examine the responses to the closed-ended questions. The data was also presented in a descriptive manner for clarification. The researchers attempted to identify themes from the teacher participants' responses after verbatim transcription of the responses for the open-ended questions.

Findings

Student Participants' Responses to the Closed-ended Questionnaire

The student participants, through a Google Form, responded to ten statements. The statements precisely followed the Likert Scale, with four choices given to the participants:

strongly agree, agree, disagree, and strongly disagree. The option 'neutral' was purposefully excluded to derive a better study outcome; hence the choice of options was forced. The responses were assessed once again by calculating the mean score. As a result, the following mathematical figures were considered:
Strongly Agree=4
Agree=3
Disagree=2
Strongly Disagree=1

In addition, a mathematical representation scale based on the mean score was created to show the survey questionnaire findings:
3.51- 4.00 = very positive perception
2.51- 3.50 = positive perception
1.51- 2.50 = negative perception
1.00-1.50 = very negative perception

In the table below, the details of the statements and the responses are provided:

Table 2: Percentages and Mean Score from Students' Responses

Statements	Strongly Agree (%)	Agree (%)	Disagree (%)	Strongly Disagree (%)	Mean Score
1. Short yet timely online assessments were used to facilitate learning.	3.33	86.67	10		3.13
2. The online assessments measured related contents.		86.67	13.33		3
3. Teachers used a variety of tools in e-assessments to assess relevant content, including podcasts, photos, videos, and reading texts, which improved my learning potential.	13.33	80	6.67		2.87
4. Various learning steps such as planning, executing, reflecting, and redesigning were followed in some e-assessments.	13.33	76.67	10		3.07
5. Teachers gave clear instructions before every e-assessment.	3.33	80	16.67		3.03
6. Teachers gave fair marks/scores/grades in every e-assessment throughout the course indicating achievement and progress.		86.67	13.33		3
7. Opportunities were given to individuals to discuss areas of improvement after each e-assessment.	13.33	80	6.67		3.07
8. E-tools such as Google Docs, Slides, and Forms etc. were trustworthy and dependable for online assessments.	6.67	86.67	3.33	3.33	2.93
9. Each e-assessment was specific and time efficient.		86.67	13.33		3
10. Technical glitches made e-assessments look impractical at times.	13.33	66.67	20		2.87

Teacher Participants' Responses to the Open-ended Questions (questions are given in Appendix A)

Responses to Question no. 1

T1 and T2 mentioned that since the feedbacks were given in Google Docs, students could pay close attention to the comments while checking their papers afterwards. This practice enabled them to work more on the feedback compared to F2F situation. In terms of exchanging peer-feedback, the teacher had to play a crucial role. Teachers might urge students to exchange feedback. The situation of exchanging peer-feedback was quite similar to the offline classes as students had the same enthusiasm while checking their peers' copies. Therefore, T2 considered e-assessment as a benefit when it came to exchanging feedback.

Similarly, T3 and T4 voiced that comprehensive individual and group feedback could be given to students through Microsoft Team, Zoom breakout rooms, and Class Note Book. Even the students felt comfortable in exchanging peer-feedback compared to F2F classes. T3 added that this practice of using technology could continue even after the pandemic as it made the process easier and clear.

Responses to Question no. 2

Due to this distant learning situation, certain limitations cropped up while bringing variation in assignments/tasks for e-assessment. T2 and T3 narrated that not all students were competent in utilizing technology. The teachers might integrate various apps to help students become more adept; however, due to students' lack of knowledge, it was not always possible to bring variation.

T1 and T4 also mentioned that fewer options were available in terms of assessing students' potential through various tasks/activities. Previously, students would sit for on campus exams where chances of copying or plagiarizing were much less. However, in online exams, students could not be given closed-ended questions in order to prevent cheating.

Responses to Question no. 3

Four of the participants found no difference in measuring content knowledge of the students virtually. T2 added that the techniques might have changed but the same knowledge was being tested online. For instance, reading comprehension capacity and translating comprehension into noun phrases or choosing a specific choice were two key ways of measuring undergraduate students' reading skills in English reading classes. To prevent students from fast copying from each other behind the camera, the choosing option was omitted intentionally. Students now converted their comprehension into small noun phrases instead of matching headlines, as measured by the same skills. Instead of true/false responses, students now did flowcharts.

Responses to Question no. 4

While answering this question, four of the participants had similarity in their responses. T2 elaborated that fine tuning of the tasks was done based on the level of proficiency of the students. To illustrate, if students' competency differed, teachers increased the level of difficulty for the competent students to make those tasks enjoyable and challenging at the same time. In one of the EAP courses, T2 had increased the number of citations and word limit for the

argumentative essay writing task for students with better proficiency. This was how the course goal was achieved.

Responses to Question no. 5

T3 responded to question 5 as such: e-assessments could be dependable and trustworthy, provided students were properly trained in technical literacy. The use of real content e-assessments could be extended as long as teachers ensured students' enthusiasm for learning new topics. Learners must see this opportunity as a benefit for learning rather than doing assignments for the purpose of grades.

T1, T2, and T4 responded in identical manner saying that there was a great chance that students might plagiarize as software that could identify unfair tactics through eye movement or other action was not employed. Through the use of such technologies, e-assessments might become completely trustworthy and dependable. Another concern was that students kept their own private chat groups to exchange answers. Hence, whatever creative changes were done, the possibility of copying remained. Therefore, e-assessments could not be trustworthy.

Responses to Question no. 6

At times e-assessments created a split in terms of socio-economic situations, T3 replied in response to the last question. If siblings used a laptop/device in the same family, it created a gap and put pressure on students. Students possessing individual laptops could not be made mandatory as it was impractical from the students' side. However, teachers might not face such issues.

On the other hand, T1, T2 and T3 mentioned that just like F2F classes, excerpts were selected from authentic materials in EAP classes, such as 'The Washington Post' and 'The Daily Star', which were written in standard English. Thus, e-assessments were practical in terms of material availability. If necessary, utilizing synonyms or adjusting the phrasing was done. Adding diversity to an e-assessment, on the other hand, might be time intensive as teachers had to create three to four sets of questions for each batch.

Discussions

Responses to Research Question 1

Except for one statement, majority of student participants felt that e-assessment for an EAP course was helpful since they had a positive perspective towards the rest of the statements. According to Khan (2018), an effective assessment should have three primary characteristics: validity, reliability, and practicality. These aspects were expected to be present in e-assessment practice as well. Students found e-assessments to be valid, since the tasks/activities tested related content, the instructions were clear, and the tasks/activities or e-tools facilitated their learning. This result was consistent with the work of Huda et al. (2020)—showing that tertiary level students had validity in the e-assessment. Dermo (2009) found a similar outcome in his study in which students had a positive attitude about the existence of validity in e-assessments. The second factor, reliability, was present in e-assessments as students found e-assessments to be trustworthy and dependable. Other studies done by Huda et al. (2020) and Dermo (2009) found that students could depend on e-assessments despite the fact that the circumstances were diverse and the participants were selected at random. Finally, student participants felt that e-assessments

might be impractical owing to technical issues. The findings were consistent with Huda et al. found in their study. However, the results of Dermo's (2009) study indicated a different result, with student participants in his study having a favorable attitude in terms of practicality. As a result, a conclusion might be taken that students' experiences may differ depending on the context.

Responses to Research Question 2

From the responses of the teacher participants, it was visible that though they could ensure validity of e-assessment, the presence of reliability and practicality was questionable. The teacher participants made sure to create the tasks/activities equally challenging for high achievers to ensure validity. For example, fixed number of citations of scholarly articles, use of harder passages and increase of word limit could raise their level of performance. In this manner, teachers applied Krashen's comprehensible input hypothesis (i+1) where they would learn a little bit more than they already knew (as cited in Lightbown & Spada, 2013).

Also, e-assessments gave students more opportunities to be involved in the learning process, according to the teachers. Using e-tools like Google Doc, Microsoft Team, and Google Classroom helped the feedback-providing process smoother. In comparison to traditional pen-paper assessments, Mora et al. (2012) saw e-assessments as a benefit since teachers could offer rapid feedback which helped students understand the topic better and work on their shortcomings. Furthermore, teacher participants stated that using Google Docs or Zoom Breakout Rooms might encourage hesitant students eagerly share feedback with their classmates. This contradicts the findings of Bachigalupo et al. (2010) who discovered that online exams made it difficult to encourage students. As student participants were more comfortable giving feedback online, this practice supported Vygotsky's (1987) concept of Zone of Proximal Development (ZPD) in which students could move from their current development level to their potential development level by exchanging ideas and feedback with competent partners or supervisors (as cited in Lightbown & Spada, 2013). Students could provide each other comments on the e-assessments, which would help them progress to the point when they could use the language independently.

Teacher participants, on the other hand, were unable to overcome several obstacles that limited their creativity to some level. Most importantly, students lacked proper training in terms of using various apps, and some of them were unable to grasp the concept of e-learning. Whitelock and Brasher (2016) noted, e-assessments might not be appropriate to assess students' potentials due to a lack of students' expertise and experience.

Conclusion and recommendations

New technologies open up new possibilities for learning and assessment. The benefits of technology cannot be ignored; they can only be postponed. Even though many online education programs were developed until 2020 (Doğan et al., 2020), many teachers, students, or institutions lacked the essential skills and only used them on occasion. However, because of the COVID-19 outbreak, everyone had been obliged to use online platforms, regardless of their linking and disliking. Those with prior experience in this field adapted quickly, whereas the rest struggled to adjust. As a result of recent events, postponing the use of online learning and e-assessment apps is no longer an option. Instead of avoiding them, we should focus on addressing the most significant problems in the process, such as cheating, plagiarism, and taking the exam for

someone else. It also needs to be explored how students' learning experiences can be improved by introducing innovative changes to the assignments and activities. The current research might lead to new prospects for creating e-assessment, as well as the need for a blended approach, in which e-assessment is combined with traditional evaluation based on students' demands and needs.

Although the sample size was limited, this study elicits teachers' and students' perceptions on the efficacy of e-assessment. For a deeper understanding, further research with more teacher and student participants should be conducted to understand the innovative adjustments used by teachers to maintain the validity, reliability, and practicality of e-assessments. During their discussion of their overall experience, teacher participants mentioned a few hurdles that may render the e-assessments ineffective. Readers can look for practical solution to these problems. The findings may encourage teachers and students to acquire appropriate training to continue using e-assessments.

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Appendix A

1. Do you see use of technology as an advantage or a drawback when it comes to providing feedback or encouraging peer feedback for e-assessments? Please provide reasons behind your preference.
2. To what extent is it challenging to bring variation in tasks/activities for e-assessments?
3. How did you make sure e-assessments measure relevant content?
4. Have you replaced less efficient activities by other effective activities based on students' performance and feedback for e-assessments? Please explain why or why not.
5. To what extent are e-assessments dependable and trustworthy?
6. To what extent are e-assessments practical in terms of material and technological resources and time set for each task/activity?