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# Paper-and-pencil vs Online Assessment in Distance Education: Examining EFL Students' Preferences and Challenges in a Mozambican Tertiary Institution

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## ABSTRACT

This study aimed to examine the phenomenon of Distance Learning Assessment (DLA), in an English Language Teaching (ELT) Undergraduate Degree at a public university in Zambézia Province, Mozambique. The purposes of this study were (1) to find out students' preferences related to the assessment systems in use at a public higher education institution, and (2) analyse the challenges they face in an online and paper-and-pencil testing system. To achieve these purposes, an explanatory sequential mixed-methods design was used. Therefore, quantitative data were obtained from four tests measuring 130 students' progress in the topics previously discussed, and using descriptive statistics and a t-test, their scores from the two testing systems were presented and compared. Furthermore, a qualitative open-ended web-based questionnaire was employed to explore participants' preferences and challenges in distance learning assessment systems. The findings indicate statistically significant differences between paper-and-pencil test scores and online test scores, with participants performing significantly better in the online testing format. Regarding their preference, most of the English as a Foreign language (EFL) students majoring in ELT prefer the online testing system due to its numerous advantages. However, its main challenges included internet service/s, the time the tests took place, and the availability of Moodle learning management system. Regarding the paper-and-pencil testing system, the major challenge reported was the travelling and accommodation costs involved since these tests take place at the resource centres. In alignment with these results, distance education stakeholders should take further steps towards improving the testing systems in use at this institution.

***Keywords:*** Distance Learning, Testing systems, Paper-and-pencil assessment, online assessment, ELT/ EFL, Mixed-methods, Mozambique

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# Uzaktan Eğitimde Kâğıt-Kalem ve Çevrim İçi Değerlendirme: Mozambik'teki Bir Yükseköğretim Kurumunda İngilizceyi Yabancı Dil Olarak Öğrenen Öğrencilerin Tercihleri ve Karşılaştıkları Zorlukların İncelenmesi


## Öz

Bu çalışma, Mozambik'in Zambézia eyaletindeki bir devlet üniversitesinde, İngilizce Öğretmenliği lisans programı çerçevesinde Uzaktan Eğitimde Değerlendirme (UED) olgusunu incelemeyi amaçlamıştır. Bu çalışmanın amaçları (1) öğrencilerin bir devlet yükseköğretim kurumunda kullanılan değerlendirme sistemlerine ilişkin tercihlerini ortaya çıkarmak ve (2) çevrimiçi ve kâğıt-kalem temelli ölçme sistemlerinde karşılaştıkları zorlukları incelemektir. Bu amaçlara ulaşmak için açımlayıcı sıralı karma yöntem tasarımı kullanılmıştır. Bu bağlamda, 130 öğrencinin daha öğrenilen konulardaki performanslarını ölçen dört farklı sınavdan nicel veriler elde edilmiş ve betimleyici istatistikler ve t-testi kullanılarak iki ölçme sisteminden aldıkları puanlar karşılaştırılmıştır. Ayrıca, katılımcıların uzaktan eğitim değerlendirme sistemlerine yönelik tercihlerini ve bu sistemde karşılaştıkları zorlukları araştırmak için açık uçlu web tabanlı bir anket aracılığı ile nitel veriler toplanmıştır. Bulgular, kâğıt-kalem testi puanları ile çevrimiçi test puanları arasında istatistiksel olarak anlamlı farklılıklar olduğunu göstermektedir ve katılımcılar çevrimiçi test formatında belirgin şekilde daha iyi performans sergilemiştir. Tercihleri konusunda ise, Yabancı Dil Olarak İngilizce (YDİ) öğrencilerinin çoğu, sayısız avantajı nedeniyle çevrimiçi sınav sistemini tercih etmektedir. Bununla birlikte, ana zorlukları arasında internet hizmeti / hizmetlerinde karşılaşılan sıkıntılar, sınavların yapıldığı zaman dilimi ve Moodle öğrenme yönetim sisteminin kullanılabilirliğine ilişkin sıkıntılar yer almaktadır. Kâğıt-kalem sınav sistemiyle ilgili olarak bildirilen en büyük zorluk ise, sınavların belirli sınav merkezlerinde yapılmasından dolayı ortaya çıkan seyahat ve konaklama masraflarıdır. Bu sonuçlarla uyumlu olarak, konu ile ilgili uzaktan eğitim paydaşları, kullanılan sınav sistemlerini iyileştirmeye yönelik daha fazla adım atmalıdır.


***Anahtar Kelimeler***: Uzaktan Eğitim, Sınav sistemleri, Kâğıt-kalem ile değerlendirme, çevrimiçi değerlendirme, Yabancı Dil olarak İngilizce (YDİ), karma yöntemler, Mozambik

## Introduction

The COVID-19 pandemic has significantly impacted education systems worldwide, forcing a rapid transition to distance learning (Comiche et al., 2024; Dağgöl Dişlen & Akcayoğlu İşpınar, 2023; Ergin et al., 2022). This shift has presented numerous challenges, particularly in the realm of assessment. Students across various educational levels have encountered difficulties adapting to remote assessment methods, while also developing preferences for certain approaches (Pingol, 2022). Research indicates that distance learning assessment poses unique challenges for both students and educators. For younger students, particularly those in early primary school, online assessment has proven problematic due to limited computer skills and the need for parental support (Zubala et al., 2023). Additionally, issues such as internet connectivity, motivation dynamics, and difficulty in understanding learning materials have been reported as common obstacles (Suharsih & Wijayanti, 2021). Despite these challenges, students have shown preferences for certain aspects of distance learning assessment. Many appreciate the flexibility and accessibility offered by online platforms, as well as the opportunity for increased learning autonomy (Souto Romero et al., 2024; Suharsih & Wijayanti, 2021). In addition, students value interaction and communication with teachers and peers, emphasizing the importance of feedback in the assessment process (Pingol, 2022; Qafzezi & Kadi, 2023). As educational institutions continue to deal with the complexities of distance learning, understanding these challenges and preferences is crucial for developing effective assessment strategies that support student learning and engagement.

In Mozambique, many academic institutions offer Distance Learning Courses. Distance learning has been adopted in various Mozambican secondary schools. Initially, it was implemented in schools within one of the northen provinces (Nampula) in 2004 and subsequently expanded nationwide in 2008 (Alberto & Tumbo, 2022). It is also present in higher education institutions (Comiche et al., 2024; Preti & Barbieri, 2013). As a result, a number of mozambian researchers have investigated distance learning focusing on different topics (Mombassa & Arruda, 2018, 2019; Lumbela, 2017; Preti & Barbieri, 2013). Among these topics, we can find the investigation of the expansion of distance learning in higher education (Preti & Barbieri, 2013); mobile learning (M-learning) mode in distance education (Comiche et al., 2024); Challenges of distance education in secondary schools and higher education (Alberto & Tumbo, 2022; Lumbela, 2017); the history of distance education in Mozambique (Mombassa & Arruda, 2018), and the the inclusion of the population in higher education through distance education (Mombassa & Arruda, 2019). Given the current trend of widespread technology utilization, distance learning is a mode of study that is likely to prevail in this country.

Although distance learning is a novel mode of study being adopted by an increasing number of Mozambican higher education institutions, the issue of Distance Learning Assessment (DLA) has been marginalised in the current literature. Instructors, commonly identified as Tutors or Lecturers within this context, as well as students encounter numerous challenges in the assessment of distance learning. It is posited that these difficulties arise from the necessity for adaptation among many learners, tutors, and

distance education administrators whose prior educational experiences were exclusively in-person. Therefore, this study focuses on the challenges students face in distance learning mode in higher education. It aims to fill the existing gap and contribute to literature by discussing the assessment phenomenon in distance education looking at students' preferences and their challenges. Thus, the following research questions (RQs) were utilised to guide the study:

1) To what extent does the assessment system employed in a Mozambican higher education institution influence students' outcome?

2) What are the challenges faced by distance learning students in the two types of testing systems utilised in a Mozambican higher education?

3) What are the students' preferences regarding the types of assessment systems utilised in a higher education distance learning?

## Literature Review

Distance education is defined as a method of learning that enables students to access various educational materials electronically, regardless of their location or time constraints (Domaç et al., 2022). Dağgöl Dişlen & Akcayoğlu İşpınar (2023) add that this mode of education "can be implemented as synchronous and asynchronous" (p. 49). These and other authors add that synchronous learning involves a group of learners, with or without an instructor, using a learning management system (LMS) or video conferencing tool to meet and interact at the same time while being separated by location. In contrast, asynchronous learning occurs when participants are separated by both time and place, however, the learning material remains consistently available to students (Amin & Sundari, 2020; Berek, 2025). Therefore, in asynchronous learning, learners adjust the timing and pace according to their individual needs (Alberto & Tumbo, 2022; Ergin et al., 2022). Ergin et al. citing Adıyaman (2002) state that we can find a one-way or two-way method in distance education. The former is characterised by utilising resources such as "Radio or TV programs, audio video tapes, CD/DVD, and printed materials" while the latter predominantly employs "interactive media, telephone, simultaneous training via the internet, e-mail correspondence, messaging, mobile applications, tele/video or internet conferences" (Ergin et al., 2022, p. 44).

On the other hand, other scholars distinguish distance learning from e-learning. They contend that distance learning typically involves students studying primarily at home, with materials and assignments sent and received by mail, while e-learning provides online courses accessible from home through the Internet, highlighting the contribution of technology to enhancing the learning experience (Al-Awawdeh & Kalsoom, 2022; Berek, 2025; Ergin et al., 2022). Aquami et al. (2024) classify such methods of distance learning as "offline, online" and "blending" (p. 1798). In this study, we will use the terms "distance learning" and "distance education" interchangeably to refer to courses delivered through a combination of Internet-based resources and face-to-face tutorials. Our focus will be on examining

how students are assessed within this mode of study and exploring their assessment preferences and challenges.

**Distance Learning Assessment**

Assessment in language education is used to determine the level of attainment of educational goals either in a course or in a specific degree (Al-Awawdeh & Kalsoom, 2022). Many scholars acknowledge that assessment is a systematic process through which the teachers, lecturers, or tutors collect students' information or data in order to measure their achievement based on the educational aims (AI-Ghazo, 2023). This author adds that it also improves students' academic performance and language skills through the feedback they receive from the tutors. Thus, in any teaching and learning mode, whether face-to-face, online, or in distance learning, assessment is a central part of a curriculum, as it is included as one of the phases of the pedagogical process (Oliveira & Pacheco, 2003). In online or distance learning, assessment is often viewed as both complex and challenging process with most of the definitions being based on the characteristics of face-to-face education (Al-Awawdeh & Kalsoom, 2022).

There are different types of assessment including diagnostic, formative and summative (Arends, 2012; Heil & Ifenthaler, 2023). Diagnostic assessment is often used before learning or teaching takes place in order to check students' readiness, while in formative assessment, tutors or lecturers use it to adapt their teaching methods during discussion of a topic or unit. Lecturers can also use summative assessment to measure students' understanding at the end of a teaching unit or topic, course/subject, cycle, term or year depending on what they want to explore or find out from their students (McNamara, 2000; Qafzezi & Kadi, 2023; Rabelo, 1998; Senel & Senel, 2021). In this study, results from summative assessments were used. In this type of assessment, tutors choose from the existing testing methods, one that best suits their learning methods. For example, in distance education, students can be assessed using paper-and-pencil method or computer-based testing (CBT), which is online. McNamara (2000) considers paper-and-pencil language assessment which is face-to-face as "a traditional test format, with test paper and answer sheet" (p. 135). Though traditional, this is the most used testing method in different educational settings in Mozambique. However, the massive use of technology among other factors allows tutors and universities to opt for an online testing system whenever possible. Thus, minimising the costs of education while maintaining the same quality (Elfirdoussi et al., 2020).

**Paper-and-pencil vs Online Testing Methods**

The assessment methodologies employed by tutors in distance education have a profound impact on students' study habits and learning outcomes (Arends, 2012). For example, online or computer-based testing (CBT) systems offer numerous advantages within the context of distance education. Gall et al. (2007) describe several benefits of CBT, including: (1) the capability to randomize or systematically vary the sequence of questions presented; (2) the functionality to record or restrict the duration a test-taker spends on each item; (3) the elimination of opportunities for test-takers to look back or ahead to

other sections of the test; (4) a reduction in scoring inaccuracies; and (5) expedited scoring processes. Furthermore, Gyamfi et al. (2019) articulate that online learning empowers students to exert complete autonomy over their learning processes, enabling them to plan, monitor, and evaluate their progress comprehensively.

In addition, McNamara (2000) identifies several advantages of online assessment, including the immediacy of providing exam results, the accuracy and consistency of evaluation, the diagnostic support for teachers and administrators, relief for test writers, and quick access to extensive test item banks. Moreover, test types beyond multiple-choice questions can be administered, and the cumbersome issue of "deciphering student handwriting is eliminated" (p. 118).

While we concur with these authors, we also recognize that paper-and-pencil assessments have their advantages, such as the ability of examiners or tutors to directly monitor or control students and minimize cheating. However, this method has its limitations compared to the advantages offered by online assessments. Thus, when administering paper-and-pencil assessments, tutors need to invest significant effort to achieve the benefits associated with online assessments, although attaining many of these advantages may prove challenging.

Conversely, Arends (2012) discusses the disadvantages of assessment in general, which can be extrapolated to distance learning assessments. He asserts that the manner in which assessment and classification processes are conducted has long-term consequences. These processes also consume a significant "portion of teacher time" (p. 214). Both paper-and-pencil and online assessment methods have their weaknesses in terms of the time required from distance learning tutors or lecturers. For paper-and-pencil assessment, tutors spend considerable time in three main processes: designing the test, administering it, and marking it. In contrast, if tutors choose to implement a variety of closed questions in online testing, the grading process becomes more efficient. However, McNamara (2000) posits that "the use of computers for the delivery of test materials raises questions of validity, (...) different levels of familiarity with computers will affect individuals' performance, and interactions with the computer may be successful for some" (p. 80). He further notes that there is a "high cost associated with computer hardware and software" (p. 80), which affects institutions administering online assessment. This financial burden also extends to students who may need to purchase computers or compatible mobile devices to fully participate in online education (Nyakuleha & Simengwa, 2023.

Each assessment is open to valid scrutiny concerning language choice, measurement techniques, testing processes, and the interpretation of the results obtained (McNamara, 2000; Winke, 2024; Wallace & Qin, 2021). In online assessment, issues of cheating or plagiarism are prevalent, as both tutors and students question whether the individual completing the test is indeed the student or another person acting on their behalf. This concern necessitates deep reflection from all participants in distance education.

**Testing methods: Students' preferences**

A comparative study conducted by Afacan Adanır et al. (2020) examined the perceptions of online examinations among Turkish and Kyrgyz students. The research revealed that Turkish learners, unlike their Kyrgyz counterparts, viewed online exams as "less stressful and more reliable and fairer than traditional paper-based exams" (p. 1). Similarly, Cross et al. (2023) reported that participants in their study expressed "significantly higher" satisfaction with the online exam environment compared to traditional settings (p. 27). These findings align with a systematic review of online assessment in higher education by Heil and Ifenthaler (2023), who posited that "online assessments have promising potential in supporting and improving online learning processes and outcomes" (p. 187). Babitha et al. (2022) ascertain that "online tests are a fantastic alternative to traditional offline tests" (p. 2458). However, contradicting these positive perspectives, Elfirdoussi et al. (2020) investigated distance education assessment in Moroccan universities during the COVID-19 pandemic. Their study concluded that both students and professors concurred that "online learning is not more interesting than ordinary learning" (p. 1).

The impact of online testing on student achievement assessment was investigated by Backes and Cowan (2018). These researchers explored whether the selection of a particular testing mode influences student performance. Their findings revealed disparities in student outcomes, with those completing English examinations via paper-and-pencil format attaining higher scores. Nevertheless, Backes and Cowan note that a huge number of academic institutions in America are embracing online testing methods. In contrast, McNamara (2000) posits that semidirect tests are the preferred approach for evaluating speaking skills in distance learning contexts, citing "cost considerations and the logistics of mass test administration" as factors that render this method "cheaper to administer" (p. 82). Within Zambézia province, some higher education institutions have opted to primarily utilize online evaluation to measure their students' progress during the teaching process. Certain institutions have stipulated that paper-and-pencil assessments be reserved exclusively for final examinations at the end of the semester.

**Challenges in Distance Learning Assessment**

Regarding the implementation of online exam, Afacan Adanır et al. (2020) indicate that students' "major issue was cheating" (p. 13). To deal with such practice, these authors suggest that with the advancement of technology, higher education institutions may consider the adoption of "more appropriate frameworks and control procedures" which might include the "novel technologies that provide online proctoring capabilities" (p. 13), thus, contributing to the elimination of cheating issues. Guangul et al. (2020) concluded in their study about challenges of remote assessment in higher education that "academic dishonesty, infrastructure, coverage of learning outcomes, and commitment of students to submit assessments" (p. 519) were among the major challenges experienced by their participants. The cheating concern found in both Afacan Adanır et al. (2020) and Guangul et al. (2020) studies is challended by Babitha et al. (2022) to whom "online exams may be performed without cheating" as long

as the higher education institutions promote the use of "AI-based exams and AI proctoring capabilities" (p. 2462).

Students in Distance Learning Assessment face additional challenges. For Kara et al. (2019) such challenges, "vary depending on their age, gender, knowledge and skills as well as the context in which they study" (p. 5). Hara and Kling (1999) conclusion can be used to demonstrate such variation. These authors concluded that their participating students were demotivated due to the delayed feedback, lack of clear instructions, and technical difficulties. However, we contend that this can be observed in any testing system. For example, in a paper-and-pencil testing system, lecturers have to read and provide feedback to their students which demands a lot of time. As a result, they might do it after a long time or sometimes they might simply ignore that they need to provide feedback to their students. This affects the students' performance since their motivation might either increase or decrease based on the way lecturers or tutors behave after a test is done in a given course/ subject.

In the same way, the lack of clear instructions can be found in both online and paper-and-pencil assessments. When the assessment is online, the third challenge should be considered as the number of technical problems, including connectivity issues faced by students might increase (Nyakuleha & Simengwa, 2023). Besides the challenges we have just reviewed, McNamara (2000), ascertains that computer-based testing is "a potential of double jeopardy (inadvertently evaluating not only language [knowledge] but also computer expertise)" (p. 118). This is a fact in Zambézia context if not in all the country where we still have people whose acquaintance with computers is limited and below the average. Therefore, when using online assessment, students are more likely to be assessed not only their knowledge of the content but also, though indirectly, their competence in using computers or technology (Nyakuleha & Simengwa, 2023). Thus, some students might score low results not because of a lack of knowledge of the subject but because of illiteracy of information and communication technology (ICT).

## Method

### Research design

To understand students' preferences and challenges they face in the testing systems in use at a public higher education, a four-month study, corresponding to one semester, was conducted with students majoring in English Language Teaching in 2019 enrolled in two modules. Therefore, this study adopted an explanatory sequential mixed method design (Perdede, 2019). In this type of research design, researchers firstly collect quantitative data, followed by qualitative data. As such, we initially gathered data from the students' test scores during the semester, and the qualitative data was collected from an online open-ended web-based questionnaire as detailed in the section about data collection.

### Research Context

This study included as its population the first and second year Mozambican EFL distance learning students who were majoring in English Language Teaching in 2019. They were attending a

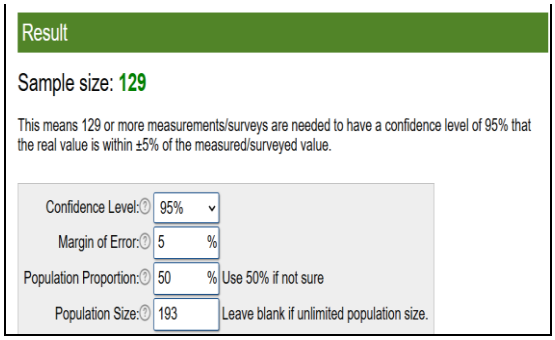
public university within Zambézia province but they were coming from different provinces within the centre and northern part of the country. At the time we conducted this study, the students were supposed to meet their local tutor every fortnight for presentations of their assignments in different subjects. Therefore, they had both a local tutor, who was a guide for them, and a number of lecturers (speciality tutors) corresponding to the number of modules in each semester. Speciality tutors provided subject-specific support through expert guidance, in their specialised subjects. They could meet the students twice per semester for two in-person tutorials lasting about an hour each. Thus, they mostly used online sessions for most of the learning activities which were conducted through Forums and Chats on a Learning Management System (LMS). However, at the time we collected data, they did not favour online testing. As a result, students were assessed using paper-and-pencil method. Since adopting online assessment would also mean including some tests, and final exams, which were stipulated to be taken face-to-face. Despite this reality, the assessment of participants in this study included both paper-and-pencil and online methods.

**Sampling**

For the present study, we selected two different modules taught by the same speciality tutor. Module 1, selected from first year, had 112 students enrolled, and Module 2, from second year, had 81 students. In total, they were 193 students in the two modules. As a result, for the quantitative data, using online sample size calculator, with the confidence level of 95%, we obtained 129 or more as the necessary number of participants (see Fig. 1). Since we had two classes, we decided that we would include 130 participants for the analysis of results from the four tests.

**Figure 1.**

*Online sample size calculator*




Since we decided to include 130 participants for the analysis of the test results, we selected 75 students from Module A and 55 students from Module B. This decision allowed us to obtain a proportional number from the two classes based on the following calculations:

**Module A**: $\frac{112}{193} \times 130 \approx 75.4$ **Module B**: $\frac{81}{193} \times 130 \approx 54.6$

For the selection of the participants, a purposive sampling method was used based on the following criteria: (1) all participants had to be enrolled in the module, (2) they should have all the four tests (2 paper-and-pencil, and 2 online).

Similarly, in the open-ended web questionnaire that aimed to collect qualitative data, we displayed the questions to all the students, however, our target was to obtain feedback from the same students who had met our criteria established in the last paragraph. As a result, we received answers from 78 students. After reading the answers we perceived that some answers were similar. Therefore, we purposively selected 30 participants' answers for qualitative analysis. Their answers represent most of the participating students.

**Data collection instruments**

As we explained in the last section, data from four tests and an online open-ended Web Questionnaire were used for data collection. Many scholars have defended and adopted the use of the results from students' tests to achieve different aims in research (Luckesi, 2011; Sukmawati & Zulherman, 2023). For this study, two different testing systems were used to collect data for the quantitave analysis. Starting from paper-and-pencil tests and followed by an online testing system, four tests were administered in each module, and their results were collected during the 1st semester of 2019. We firstly used paper-and-pencil for Test 1, followed by an online Test 1. The same procedure was followed with Test 2. Thus, in total, we had two paper-and-pencil tests and two online tests for each module. The inclusion of tests results aimed at (1) comparing the results from the two testing systems and seeing whether the participating students scored different results in the two-testing system and see its significance.

After collecting data from the tests, an open-ended Web questionnaire (Züll, 2016) was used in the last month of our study (the last two weeks of June 2019). According to Züll (2016) researchers may determine the mode of the open-ended questionnaire which might take the form of an interview (if face-to-face or using telephone) or the researcher might decide that "the question appears on the computer screen/on paper, and the respondent enters the answer into the text field provided (web or postal surveys)" (p. 1). In this study, our open-ended questionnaire adopted the second option, whereby it was made available on the web system, and lasted 15 days allowing participation of anyone willing to provide answers. The instructions included information that the participants' responses would be used merely for academic purpose and their participation was not compulsory. We set five open-ended questions which allowed the participants to freely express their views about Distance Learning Assessment (DLA) in use at the higher education institution where they were studying. The response rate was good since we obtained data from a total of 78 students from the two modules.

**Data analysis**

Data collected from the first instrument (Tests results) were analysed and presented using both descriptive statistics and t-test analysis. The t-test was employed following the confirmation of a normal distribution through normality tests. This quantitative data from the tests was presented using SPSS program where scores from each module were introduced separately in two tables, resulting in tables 1, 2, 3, and 4, and then descriptive and inferential statistics were used to analyse, explain and describe the phenomenon under study (Cardoso et al., 2019; Gall et al., 2007; Sousa & Baptista, 2011).

Since we also wanted to describe students' preferences and the challenges they encounter in distance learning assessment, data collected from open-ended web questionnaire were presented and analysed using thematic analysis technique, that is, all aspects related to the same theme were grouped together (Bell & Waters, 2018; Braun & Clarke, 2023, 2024). Qualitative data were collected electronically, therefore, it was possible to transfer them to a word document format. Following this procedure, I read the answers, coded the data, and analysed them using MS Word. Due to similarities of the responses, only some participants' responses (30) were included in this article. The codification of data and organisation of the corresponding themes were based on the last two research questions which included the distance assessment challenges, and students' preferences when using either paper-and-pencil or online assessment methods.

To enhance the trustworthiness of our qualitative findings, peer debriefing was used (Stahl & King, 2020). Three additional educational researchers, who are my colleagues, were invited to review and analyse the initial data presentation section and provide general comments. Their insightful feedback contributed not only to the improvement of the findings section but also to the overall quality of the article. Furthermore, in 2019, the initial data was presented at a national conference attended by Distance Learning stakeholders who provided valuable suggestions for improving data presentation techniques. When necessary, participants were contacted to provide feedback on the information presented in the manuscript. Stahl and King (2020) consider this practice as "member checking" (p. 27). In cases where misunderstandings arose, prompt corrections were made to ensure that the presented information accurately reflected the participants' intended messages.

**Ethical procedures**

In accordance with local Mozambican practices, this study was exempt from formal ethical approval processes as it did not involve infants, vulnerable populations, or sensitive topics. This approach is common across most universities, including the institution where I am currently employed. At the time of this study, the university did not have an Institutional Review Board; therefore, the exemption aligned with the standard procedures of the Faculty Postgraduate Directorate.

Nevertheless, I ensured that all necessary institutional permissions were secured prior to conducting the study at the university where this research took place. Approval was granted by the heads

of the Faculty, Department, and the English Division, consistent with the local standard practices for studies of this nature at the time. After this procedure, the lecturer who provided quantitative data through the documents containing students' scores was contacted. He was informed about the study and voluntarily agreed to participate and use the two testing systems. At the end of the semester, he provided the researcher all students' scores from the four tests.

Although the institutional approval was granted orally, all participating students were required to read and agree to the online consent form provided before accessing the online web-based Questionnaire. Students were informed that their participation was not compulsory and that their decision would not affect their grades. Furthermore, it was made clear that their names would never be publicly presented in any circumstances and codes would be used to report their data. They were also informed that if they decided to withdraw after providing data, they could freely contact the author and their data would be removed from the data set. Consequently, only those who agreed to participate in the study answered the open-ended questionnaire. Following this ethical agreement, while presenting data, students' names were omitted for anonymity purpose and we abbreviated Participant as (P) followed by a number (e,g, P. 1), for Participant 1.

## Findings

This study was conducted using results from students' tests and an open-ended web-based questionnaire. Therefore, in this section, the results obtained from the two data collection instruments will be presented and analysed separately.

RQ1: To what extent does the assessment system employed in a Mozambican higher education institution influence students' outcome?

To answer this question, we used the data collected from the students' test scores, whose findings are presented in the following section:

### Paper-and-pencil versus Online Tests' Scores

In the Mozambican context, academic scores range from zero to twenty (0-20). Using SPSS, T-test, the mean and standard deviation (SD) were calculated to compare the results of paper-and-pencil tests with those of online tests. The data were presented in tables that summarize the test scores from the two modules.

### Module A

**Table 1.**

*Descriptive Results - Year 1- EFL Students*

| Test Type | Test | Mean | SD* |
|---|---|---|---|
| **Paper-and-pencil** | Test 1 | 8,31 | 2,43 |
| | Test 2 | 8,40 | 2,13 |
| **Online** | Test 1 | 10,33 | 2,97 |
| | Test 2 | 12,45 | 2,97 |

***SD** = standard deviation

Our data from Module A, displayed on Table 1, shows that there are significant differences between paper-and-pencil and online test results, with online tests showing higher mean scores and slightly more variability. For the paper-and-pencil tests, the average score for Test 1 was 8.31, with a standard deviation (SD) of 2.43, and Test 2 had an average of 8.40, and the SD decreased to 2.13, indicating moderate variability in scores. The minimum score for these tests was 3.35, for Test 1, and 2.50 for Test 2, while the maximum scores were 14.15 in Test 1, and 13.15 in Test 2. These scores reflect a similar range of performance in the two paper-and-pencil tests. On the other hand, online tests' results demonstrate that the average scores for Test 1 were higher (10.33), with SD of 2.97. In Test 2, the mean score increased significantly to 12.45, with the SD remaining at 2.97. Compared to paper-and-pencil, online minimum scores were 0.00 for Test 1 and 6.00 for Test 2. Out of 20, the maximum score was higher in online tests, that is, 16.63 in Test 1 and 19.00 in Test 2, indicating a wider range of high-performance outcomes. This is also confirmed in the following t-test table.

**Table 2.**

*Independent Samples t-test for EFL undergraduate Students' scores*

| | Scores | *t* | *df* | Sig (2 tailored) | Mean difference |
|---|---|---|---|---|---|
| **Test 1** | Paper-and-Pencil<br>Online | -4.565 | 148 | .000 | -2.03347 |
| **Test 2** | Paper-and-Pencil<br>Online | -5.792 | 148 | .000 | -2.46733 |

Based on the t-test results, we affirm that in module A, there is a strong, statistically significant difference between paper-and-pencil and online EFL students' performance. This fact confirms that the online testing system presents better results, as seen in Table 1. In the following section, we compare the results from Module B, presented in tables 3 and 4.

## Module B

**Table 3.**

*Descriptive Results - Year 2- EFL Students*

| Test Type | Test | Mean | SD* |
|---|---|---|---|
| **Paper-and-pencil** | Test 1 | 8.38 | 3.70 |
| | Test 2 | 8.85 | 2.34 |
| **Online** | Test 1 | 8.63 | 3.36 |
| | Test 2 | 9.31 | 2.51 |

***SD** = standard deviation

Similar to results from Module A, in this Module, based on the data displayed in table 3, participants performed better on online tests compared to paper-and-pencil tests. Looking at the two testing systems, we can see that the average score for online tests are different from paper-and-pencil testing format. This difference was higher in Test 2, while in Test 1, despite online tests presenting a

slightly higher score, the findings suggest that the difference is not worth noting since the score are almost similar.

Variability in scores measured by the SD was higher in Test 1 for both formats. Online tests had consistently lower variability than paper-and-pencil tests, suggesting a more consistent performance among participants in the online format. Added to this data are the minimum and maximum scores which suggest that Test 1 had the lowest score in paper-and-pencil compared to online Test 1. However, in Test 2, the online minimum dropped to 1.00, suggesting some participants faced challenges, possibly technical or content-related. The maximum scores in all tests were below the 20-point maximum, with online tests reaching 15.00 in Test 1 and 14.00 in Test 2. As noted in Module A results, in general, online tests consistently showed higher averages in Module B, indicating possible benefits such as ease of use or accessibility. The t-test was used to compare these testing systems as presented in Table 4.

**Table 4.**

*Independent Samples t-test for EFL undergraduate Students' scores*

| | Scores | *t* | *df* | Sig (2 tailored) | Mean difference |
|---|---|---|---|---|---|
| **Test 1** | Paper-and-Pencil<br>Online | -.044 | 108 | .965 | -.02727 |
| **Test 2** | Paper-and-Pencil<br>Online | -5.721 | 108 | .000 | -3.42000 |

In module B, our results from Test 1 comparison suggest that there is no significant difference between face-to-face and online results. The scores were almost identical for this test, suggesting that the testing mode did not impact performance in this case. In contrast, from Test 2 comparison, a t-value of -5.721 corresponds to a very smaller p-value. This result strongly suggests a significant difference between paper-and-pencil and online test performance.

Overall, the t-test results from the four tests used in two modules indicate that three out of four tests (-4.565, -5.792, -5.721) show a strong and statistically significant difference between paper-and-pencil and online testing systems. One test (-0.044) shows no significant difference, suggesting that in some cases, the testing mode might not matter.

**Findings from the open-ended web-based Questionnaires**

RQ2: What are the challenges faced by distance learning students in the two types of testing systems utilised in a Mozambican higher education?

The first questions of our open-ended web questionnaire aimed to find answer for our second research question. The focus was on online assessment, since responding to this question would give us the idea they have about the paper-and-pencil testing system that was mostly used at the time we collected data. Based on the participants' responses, the following subthemes emerged:

**Time and cost-effective**

The results reveal that the majority of students consider that the online testing system, compared to paper-and-pencil tests, saves time and is cost-effective. The following participants' extracts provide a general picture of their perceptions regarding this theme:

> P. 2: "Different from in-class tests, online can help the students to avoid traveling to Mocuba (the resource centre location), because in my case, I live in Molocue and a return ticket from Molocue to Mocuba is fifty hundred, without adding the costs associated with booking a room, and buying food. Online assessment can reduce all these expenses."
> P. 1: "Online test is easy to do and fast, as well as it is economical." … "Online tests would help us save money that we use for transport and the money that we pay for exams papers."
> P. 2: "The time that the online assessment were made available (at night), I did not have time."
> P. 15: "It saves a lot of money for students, e.g., I live in Niassa far from resource centre. It also saves money for the University because in-person assessments need speciality tutors, transport, and papers used during the test."… "There are also costs involved with online assessment softwares."
> P. 3: "Students face many challenges such as computers and phones are very expensive to get them."

In general our participants reported costs involved in both paper-and-pencil and online testing systems for both students and university. For the university, they included costs involved with the online assessment software, while for the students the participants reported costs involved with their traveling, accommodation and additional budget when they are out of their villages, districts, cities or provinces for the paper-and-pencil assessment. In contrast, in online testing they stated that the costs were significantly low for them since they just needed internet, and appropriate computers or cellphone. As they added, though computers and cell phones are expensive, they buy them once for the whole degree.

**Flexibility, students' comfort and promptly Feedback**

When expressing the challenges participants face in DLA, many students stated that online testing provided them with various advantages compared to in-person testing. Some of the challenges experienced in paper-and-pencil testing which are minimised by the use of online testing include the flexibility regarding where and when they can write tests and immediate feedback. They mentioned that it was more comfortable writing the tests online than in-person, and they received immediate feedback in online testing different from paper-and-pencil system. The following extracts illustrate these facts:

> P. 15: "The students are able to do the assignment anywhere and anytime, multiple students can complete the online assessment at the same time and have feedback about the test on time."
> P. 31: "The environment of performing test is selected by you, like performing listening music or watching TV, performing in silence, etc."
> P. 35: "write the test at home and well relaxed at a good environment"
> P. 27: "We went for distance course because of our incompatibility of time, and with online assessment we do not have to worry with travels, we can do it in our own comfort."
> P. 18: "You do the test in some place alone, noiseless, and without any tutor to control you (because this sometimes disturbs)."
> P. 30: "They are easy to get the feedback assessment after writing the test, and also student get encouraged to study more before he begins to write the test and sometimes we are given to write the second chance."

As can be read in these extracts, the participants' perspectives show that if online tests are adopted there are many benefits for them. They can easily manage their time and they feel motivated when getting feedback as soon as they finish their tests.

**The internet connectivity or coverage and test timing**

Different from paper-and-pencil tests, the internet network system/coverage and its quality were pointed out as one of the main common challenges and disadvantages in online testing in DLA, as confirmed by most of the participants. As a result, once they open the test, the timer begins, and even if the internet connection is lost, the system continues to count the time. The following extracts illustrate our participants understanding regarding this theme:

> P. 31: "Internet problems, and short time of availability."
> P. 15: "Technology is not always reliable, there might be connection or internet problems."
> P. 8: "Because of the reality of our country, mainly the part of network, it sometimes doesn't help doing online assessment."
> P. 36: "Daily, I was supposed to go to my workplace and back, a distance of nearly 30 Km to have access to network coverage and platform." [sic.]
> P. 2: "The challenges I faced were: problem of network; lack of megabytes…"
> P. 28: "It becomes difficult for me because I work in countryside and there is no network."
> P. 1: "Sometimes if the network is bad, then it becomes hard to do the online test."
> P. 6: "The tests start counting as the student opens it and when the network is down you automatically fail."

The respondents pointed out that it becomes difficult to overcome the chalenges when the issue of the quality or availability of the Moodle platform is added, as stated by P. 36. The Moodle Learning Management System (LMS) sometimes is not available at the time students need to write their tests. Our participants reported having failed to do some tests due to this challenge.

**Unavailability of electricity in remote areas**

Working in places where there is no electricity makes it difficult to charge computers and cell phones. Many students attending distance learning work in very remote areas, sometimes without access to electricity, which affects them in accessing the distance learning platforms. They end up keeping all the learning activities for the weekend when they travel to nearest villages. That is the reason why they stated the following:

> P. 35: "Students who live and work in the countryside don't have electricity power to charge phones."
> P. 36: "In order to have access to electricity" this participant travelled a 30 Km distance daily.
> P. 28: "Lecturer! Don't give online tests during the week because most of students are working in the bush."
> P. 10: "Most of us are working in the countryside."

Based on our respondents, the fact that they spend the five weekdays in remote areas where most of the time there is no electricity poses challenges for them to follow the online activities including online tests.

**ICT illiteracy or technology awareness as a challenge in online testing**

Some students are not familiar with the use of technology when it comes to online testing, that is, they face difficulties on how to manage computers and cell phones for distance learning activities:

> P. 51: "I found big challenge, it was not possible to get in the platform, I tried many times but I did not succeed."
> P. 2: "I got low mark on Test 1 because it was the first time that I faced online test, but I'm sure that the next online test I will do my best."
> P. 15: "Another challenge is how to manage those devices because it needs some knowledge how to use the devices."

P. 18: “Here in our country we are not really prepared in terms of technology, many students have lack of computers and mobile phones as well.”

Data from our participants indicate that technological issues have had some negative impact on students’ results when they wrote online tests. Such difficulties were not experienced when writing paper-and-pencil tests. This indicates the need for further training for students on the use of distance learning technological tools.

**Test format as challenge or strength**

The participants’ answers highlight both challenges and positive aspects related to the test format and the type of questions. This was motivated by the fact that in online testing, they mostly answered true/false and multiple choice questions. This fact can be found in the following excerts:

P. 2: “I found it easy because it was multiple choice.”
P. 18: “Sometimes the questions are not as clear as possible.”
P. 25: “The use of multiple questions and true or false make students lazy in terms of reading”.
P. 11: “The questions shoud be multiple choice or true / false.”
P. 12: “The students may get lazy due to this kind of test [online].”

As shown here, some participants viewed true/false and multiple-choice questions as an advantage, considering them easier to answer. This contrasts with the paper-and-pencil format, where they were often required to answer open-ended questions that involved writing. On the other hand, some students believe that the question types used in online tests contribute to laziness. They argue that such questions can be answered without reading the material, although this may not be the case.

**Cheating in Distance Learning Assessment**

Cheating was mentioned by some participants as a concern mainly in online testing. Since they do the tests without any supervision of the tutors, the participants mentioned that some students are free to check their books or other sources while writing the tests. For example, in the following extracts, the participants express their perception regarding such practice:

P. 13: “Student writes without anyone’s supervision, he is free to consult certain sources related to the subject in charge, as long he manages the timed time.”
P. 10: “It is easier to cheat looking back to the contents forgotten.”
P. 12: “Students may copy from the books.”
P. 21: “Checking books while writing online tests.”
P. 5: “No fraud [meaning cheating] available”.

While cheating can occur even in paper-and-pencil testing, it is often beyond the control of tutors or lecturers in online testing, where students take the test in their own environment without any supervision protocols. However, P. 5 statement contradicts most of the participants when he states that in online testing, there is no possibility of cheating.

**Strategies students use to minimise the assessment challenges**

Having experienced the challenges reported in the last sections, we asked our participants the strategies they adopted to overcome them. They explained that:

P. 26: “To overcome this network problem I used to climb a mountain even at night or midnight as well.”
P. 10: “We always get the top of the mountains to see forum, and online tasks.”
P. 15: “The solution to the problem (ICT illiteracy) is having lessons about how to manage a computer.”
P. 13: “I use to use the internet from another operator [or provider].”
P.19: “There was no way out to overcome network problems.”

As revealed by our participants, some of the strategies included using different SIM cards from various mobile operators to access the Internet. Another strategy mentioned was seeking out locations with better network coverage. For instance, some would climb mountain while others would travel to villages or cities during the weekend to have access to internet. Those with lack of ICT skills defended the need to attend ICT lessons to be more familiar and prepared to handle the online activities which include the tests. Some students, who face problems getting access to Moodle LMS, reported that they interact with their classmates, and some tutors through WhatsApp and emails platforms so that they can be informed about what is happening.

RQ3: What are the students' preferences regarding the types of assessment systems utilised in a higher education distance learning?

The second and third questions in our open-ended questionnaire provided data for the last research question (RQ3). Based on the students' answers, two subthemes emerged namely: (1) online assessment, and (2) Paper-and-pencil and online testing.

**Online Assessment**

To discover students' preferences and whether the online test could be used as the only means to assess students in English language and other courses offered by the institution, we asked our participants two questions. Our results reveal that the majority of the 78 participants (62.82%) prefer and recommend the use of an online testing system due to its advantages. We present some of our participants' answers below:

> P. 49: "English Course should use online assessment without any additional tests at the centre."
> P. 1: "It would be good if we only had online tests without any additional written test at resource centre."
> P. 9: "I recommend the university to use online tests only because it will help us to reduce the expenditure we use for transport and accommodations."
> P. 42: "English course should use online tests because it is a distance course and it should be managed through distance learning platforms."
> Other participants included the following comments:
> P. 2: "I would like to ask for changes in the model of tests. Next year, only online assessment should be used and forget written tests at the centre."
> P. 26: "I could recommend using only online tests because by doing this we could feel confidence, making assessment online and only come for special tutorials and exams which have to be the way how they are (face-to-face)." [sic.]
> P. 11: "Everything can be done through online system."
> P. 20: "Although the network is bad, the online tests are still better way to assess distance learning students."

To support their position, the participants highlighted the reduction in costs, its role in encouraging participants to study, and its potential to decrease the number of students absent from in-person tests due to economic reasons. Moreover, participants understand that those enrolled in distance education have decided to do so because they cannot attend face-to-face classes, therefore, every activity in distance education should be conducted remotely using different technological tools. On the other hand, a number of participants suggested that the introduction of online testing should be accompanied by paper-and-pencil testing, as described in the following section.

**Paper-and-pencil and online testing should be used**

Some participants (33.33%) advocated for the integration of both systems, specifically the use of online testing alongside paper-and-pencil testing. This second group supported its position based on the internet issues encountered during online tests, as well as the need to develop writing skills through the open-ended questions included in tests administered at the centre, which encourage students to engage in reading.

> P. 6: "We need to be at the centre to write a formal test."
> P. 47: "I would recommend in-person written tests and some online tests. Because if someone misses online test, he/she can have marks from in-person test and vice-verse." [sic.]
> P. 29: "No! Because using only online tests could make students become lazy, so we must use both of the ways of assessment." [sic.]
> P. 51: "Face-to-face assessment helps learners familiarize with the tutors, and we can not abandon the traditional form of assessment immediately."
> P. 50: "Unfortunately we cannot use only online assessment because we could be facing a lot of difficulties."
> P. 19: "Both tests are useful because they complement each other."
> P. 44: "Because it [online] could discourage many students in reading the modules."

Although some students favoured the adoption of both testing systems, our results generally indicate that most of the students prefer online testing system. Their preference is attributed not only to the relatively higher scores achieved in this system but also to the lower costs associated with online testing, as well as the more favourable testing environment it provides, including the absence of tutor supervision.

## Discussion

**Insights from EFL students' scores**

The results of this study indicate differences in performance and variability between the paper-and-pencil and online testing systems across both groups. Our general analysis suggests that online tests resulted in higher average scores, indicating that students performed better overall in online tests and experienced a wider range of outcomes, despite the institution's practice of favouring paper-and-pencil testing. In fact, when this study was conducted in 2019, the institution emphasised the paper-and-pencil testing system, which contradicts the findings of this study, which indicate better results with online testing. Moreover, these results challenge the conclusion of Backes and Cowan (2018), whose study found that students achieved higher scores in paper-and-pencil exams, despite the widespread use of online testing systems in most universities.

However, as described in the data presentation section, the lower minimum score for online tests suggests that some participants faced more significant challenges with this format, which aligns with the findings reported by Zubala et al. (2023). This is consistent with the observations of Hara and Kling (1999) and Nyakuleha and Simengwa (2023), who noted that, despite the advantages of online testing system, it also presented several challenges, including issues related to computer and technical knowledge.

While the differences may reflect factors such as ease of access, engagement with the online format, or other test related variables (Kara et al., 2019; McNamara, 2000), the students' better performance in online testing system suggest that this system could be a more equitable and supportive assessment option for learners in distance education due to its advantages (Suharsih & Wijayanti, 2021). Therefore, online testing may offer higher performance potential to distance learning students, however it may require addressing technical issues and ensuring that all participants can engage with the platform effectively.

**Insights from open-ended web-based Questionnaire**

Our findings from open-ended questionnaire show that one of the major challenges students face is related to internet coverage and availability when taking online tests. Therefore, these tests should be scheduled on weekends to accommodate students who work in areas without internet access. In contrast, the primary challenges reported with the paper-and-pencil testing system are the higher costs associated with travelling to the resource centres, including accommodation and food. Our results align with other similar studies whose conclusion pointed to the network and costs challenges in DLA (Alberto & Tumbo, 2022; Lumbela, 2017; Nyakuleha and Simengwa, 2023; Suharsih & Wijayanti, 2021). Therefore, similar to Lumbela (2017), our results revealed that using online testing would be a common agreed solution to minimise such students' higher costs.

In fact, compared to the paper-and-pencil testing system, the findings indicate that the participants feel comfortable, motivated, and free as they write online tests since they can be answered while they are anywhere, at any time, and without any supervision or control from the tutors. This highlights the flexibility in online testing, which is not experienced in face-to-face testing (Souto Romero et al., 2024; Suharsih & Wijayanti, 2021).

Furthermore, online testing allows students to get automatic feedback right after finishing writing the test. Thus, reducing the feedback waiting time experienced when they write paper-and-pencil tests. This finding corroborates Pingol (2022) as well as Qafzezi and Kadi's (2023) results regarding the feedback aspect.

The findings from this study also show that sometimes more than one attempt is allowed in online testing, motivating students to study more before their second attempt – a practice rarely observed in the paper-and-pencil testing system. Moreover, online testing ensures greater confidentiality of results, as only the student and lecturer have access to the marks. On the contrary, paper-and-pencil tests lack this level of privacy since, after grading, lecturers send the tests to resource centres. Other staff (the resource center managers and local tutors) receive them and wait until students come back for future in-person activities and deliver the tests, contributing not only to lack of privacy but also to delayed feedback (Hara and Kling, 1999; Nyakuleha & Simengwa, 2023).

Regarding the scheduling of online tests, our results suggest that these assessments should not be scheduled for evenings or nights, nor should they coincide with the same weekend that students are taking paper-and-pencil tests at the centre. Additionally, in terms of question types, closed questions, such as multiple-choice and true/false - were reported to be easier for students.

This study also identified the lack of electricity in remote areas as a significant challenge for some students. Added to this issue is the ICT illiteracy, where some students lack the technological skills necessary to deal with distance learning tools. Many scholars have concluded that familiarity with ICT impacts students' performance in online testing (Alberto & Tumbo, 2022; Nyakuleha & Simengwa, 2023; Zubala et al., 2023).

Cheating was mentioned as a major challenge, mainly in online testing, where no specific measures are in place to minimise it. In contrast, in paper-and-pencil format, speciality tutors are sent to resource centres to control and supervise students writing tests, thereby reducing the likelihood of cheating. Similarly, Afacan Adanır et al. (2020) and Guangul et al. (2020) highlighted that students are more prone to dishonest behaviour during online assessments. To address this problem Babitha et al. (2022) suggested the use of "AI-based exams and AI proctoring capabilities" (p. 2462).

The strategies students use to overcome the challenges they encounter reinforce and validate theories emphasizing the importance of placing students at the centre of distance learning. This supports Gyamfi et al. (2019) view, which defends that online learning empowers students to take full control of their learning process, including planning, monitoring, and assessing their progress. Indeed, students are primarily responsible for identifying solutions to the assessment challenges experienced in distance learning environments.

The results revealed that most students prefer the online testing system. This preference is attributed to numerous advantages associated with this testing system. Similar findings were reported in recent studies by Afacan Adanır et al. (2020) and Cross et al. (2023), where participants also favoured online testing. However, this contrasts with the findings of Elfirdoussi et al. (2020), who concluded that their participants preferred in-person learning over online learning.

Suming up, our findings are parallel to previous studies indicating that time, costs involved, internet availability and quality, Moodle LMS among other factors should be considered when determining which testing system to adopt in DLA.

**Conclusion**

This study explored the challenges faced by higher education students in distance learning assessment (DLA) and their preferences regarding testing systems. The findings from the students' scores revealed that there were significant statistical differences between paper-and-pencil and online tests scores. A better performance was found in online tests. Despite positive results these participants obtained in online testing system, EFL distance learning students experienced several key challenges in

both assessment systems. Internet connectivity issues was the most challenging aspect that almost all participants reported. In addition, time and cost-effectiveness emerged as significant factors, with online testing offering more efficient solutions in DLA compared to traditional methods. Flexibility and comfort were also highlighted, suggesting that students value the ability to take tests in familiar environments. However, technical challenges such as lack of electricity in remote areas, and ICT illiteracy posed significant barriers for some students. The study also revealed concerns about the test format, availability of the Moodle Learning Management System, and the potential for cheating in online environments.

Despite these challenges, the general preference for online testing systems among students highlights the perceived benefits of this testing system. The advantages of online testing, including increased flexibility and immediate feedback, appear to surpass the drawbacks for many students. This preference suggests a shift in student expectations and highlights the need for educational institutions to adapt their assessment strategies. Distance learning continues to grow in importance, therefore, there is a need of addressing the identified challenges and maximise the benefits of online testing. Educational institutions and policymakers should consider these findings when developing future assessment strategies. For instance, if online tests are to be implemented for distance education, scheduling them on weekends should be considered to help students working in remote areas, allowing them to travel to nearby locations with internet access. In fact, in lign with these results, the use of online testing should be encouraged, accompanied by comprehensive ICT training for students to reduce related challenges. This can be achieved through investments in improved distance learning infrastructure, stronger student support systems, and more secure and reliable online testing platforms to enhance the overall learning experience.

**Limitations and future research**

This study acknowledges several limitations. Regarding the methodology used, the tests utilised measured similar or identical content within the same year, but they differed in format and question types across the two assessment systems. This discrepancy may have marginally influenced the obtained results. Consequently, in the future, similar research should utilise consistent question types across both testing systems. Furthermore, this study's scope was limited to first- and second-year EFL students majoring in ELT. Other studies should include students from other academic years and disciplines. Future research should focus on developing strategies to mitigate technical challenges, improve digital literacy among students, and assess the effectiveness and integrity of online assessment methods in distance learning environments. Longitudinal studies should be conducted to explore the role of technological advancements, such as AI proctoring, in addressing identified challenges, warranting further investigation. Additionally, research should focus on student-tutor interactions in chats and forums, and the quality of learning materials presented on digital platforms. Lastly, it is recognized that numerous factors may have changed since the data collection period; therefore, a follow-up study should

be conducted to analyze any changes or to determine whether the institutions and lecturers' practices remain consistent.

**Contribution Statement / Araştırmacıların Katkı Oranı**

All researchers contributed equally to the study. / Çalışmaya tüm araştırmacılar eşit oranda katkı sağlamıştır.

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**Ethics Committee Approval / Etik Onay**

Ethics committee approval was obtained for this study. / Etik kurul onayı alınmıştır.

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