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Development and Implementation of an Online English Entrance Test System during the COVID-19 Pandemic in a Malaysian University

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Abstract: International English language test centres around the world were restricted from conducting physical examinations due to the COVID-19 pandemic. This created an immense impact on the overall university admission and enrolment as students were unable to access test centres to fulfil English language enrolment requirements. Based on Alessi and Trollip's Instructional System Design Model (2001), this conceptual paper critically examines the stages of development and conversion of an existing paper-based university English Entrance Test (EET) to an online test implemented in a Malaysian private university as a measure to facilitate student enrolment during this time. This case study looks at each stage of the development of the digital platform, design, remote administration of the test and automated assessment tabulation embedded in the system. Upon a tripartite evaluation of the system by administrators, lecturers, and candidates, findings reveal a significant decrease in enrolment processing time; however, the unfamiliarity of the system posed a barrier to students. Therefore, the study's findings are hoped to equip university administrators with knowledge in developing an in-house English admission test system to ensure a sustained digital transformation and expand the body of knowledge on mitigation in higher education during crises such as a pandemic.

Keywords: Online English Entrance Test, COVID-19 pandemic, university admission and enrolment, Alessi and Trollip's Instructional System Design Model, IELTS, higher education

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Introduction

With the escalation of positive COVID-19 cases and mutating variants globally in the last two years, the Malaysian Immigration Department issued a list of 23 countries that were banned, due to the high number of COVID-19 cases (Anis, 2020). This directive had an immense impact on the educational sector which relies heavily on international student enrolment and the move was criticised by The National Association of Private Education Institutions (NAPEI). Since 2017, Malaysia witnessed a decrease of between 20%-30% in international student enrolment (Azman, 2021). The pandemic compounded the situation when the Malaysian Association of Private Colleges and Universities (MAPCU) reported a drop in foreign students' enrolment from 16,500 in 2019 to 7,000 in 2020 (Sharma, 2020). This compelled higher education institutions to conduct their admission processes of both local and international students into programs remotely.

Entry requirements into programmes for international students are based on standardised English language tests such as International English Language Testing System (IELTS), Common European Framework of Reference (CEFR) and Test of English as a Foreign Language (TOEFL iBT), to name a few. Similarly in Malaysia, these tests are benchmarked as English entry requirements for students who do not possess the standard English language qualification recognised by the Malaysian Qualifications Agency (MQA) and the Malaysian Ministry of Education (MOE). Students who depended on these international examinations were greatly affected during the recent pandemic as they relied on face-to-face testing. As a result, this posed a hindrance on the recruitment and enrolment into varsity programmes as test centres globally were made inaccessible.

Many test centres around the world, including IELTS and TOEFL, the two most globally well-known assessments for language proficiency, had to postpone scheduled assessments due to the pandemic (ICEF Monitor, 2020). Many countries were also forced to close their borders to mitigate the spread of the virus (Salcedo & Cherelus, 2020) following directives from world healthcare authorities and government officials; thus, preventing international students from travelling to sit for face-to-face language proficiency assessments. Ockey (2021) also highlighted that due to these circumstances, many affected individuals were on the lookout for language proficiency indicators that tertiary education institutions would accept to prevent delays in their enrolment.

The postponement of scheduled face-to-face language proficiency assessments and closure of borders not only made many international students anxious about meeting their tertiary education enrolment requirement, but also educational institutions in meeting their admission registration numbers (ICEF Monitor, 2020). Many tertiary institutions had to reconsider and adapt their business models and processes,

teaching and learning, and engagement styles swiftly to ensure business continuity due to COVID-19 (Nesamalar et al., 2022). As most research on the pandemic focuses mainly on teaching and learning, there is a need for in-depth research on administrative processes and initiatives in managing enrolment requirements during a pandemic. Little is known about the impact of these alternative online testing methods undertaken by tertiary institutions and its outcomes on both students and administration; thus, further research on this matter is deemed warranted.

To mitigate the closure of international test centres globally and in Malaysia, the Malaysian Qualifications Agency (MQA) issued an advisory on April 13, 2020 allowing interim measures to be implemented by higher education institutions (HEIs) in Malaysia to ensure that students who have mastered the English language at a level which was required to progress in their studies can be conditionally accepted. Further to this, it also urged HEIs to implement a suitable English placement exam after students have registered on campus. With this provision, the Language Centre at the private university in this study developed and implemented an online English Entrance test to this end. This paper aims to provide insights into designing an internal online English Entrance test, the stages of development and implementation of the system for ease of admission and enrolment of students into higher education institutions as well as its impact.

Literature Review

English Entry Requirements for Higher Education in Malaysia

The Ministry of Higher Education Malaysia (MOHE) has seen a dramatic increase of international students pursuing education at local higher institutions of learning (HLIs). Singh (2019) emphasised that due to the use of English as a medium of instruction in HLIs, Malaysia is well known as an education destination among international students. However, most international students in Malaysia are non-native English-speaking (NNES) and they need considerable assistance to bolster their proficiency in the English language. Hence, the HLIs in Malaysia have long positioned English proficiency as crucial when determining enrolment (Abd Samad et al., 2008). In fact, it is mandatory for international students to do a standardised English proficiency test to evaluate their language competence at a university's point of entry (Ismail & Othman, 2020).

International students in Malaysia mostly come from China, Thailand, and Arab countries. This was also highlighted by ICEF Monitor (2016), indicating the top origin countries of international students studying in Malaysian tertiary institutions were Middle Eastern countries, Bangladesh, China and Indonesia where the academic discourse is predominantly in their first language. Therefore, HLIs have established and continue to initiate various testing methods to facilitate English

Entrance tests ranging from a number of English preparatory programmes, of which some are compulsory for meeting the entry conditions of universities.

Students who wish to enrol in HLIs are generally given four (4) choices of standardised English proficiency tests, namely The International English Language Testing System (IELTS), The Common European Framework of Reference (CEFR), The Test of English as a Foreign Language (TOEFL) and The ELS Certified Intensive English Program (CIEP). Each university may implement any of these as specified by Malaysia's governing body, MQA which regulates and monitors the quality of all private and public higher education entities. The following provides a summary of objectives, grading structure and content of each test.

The International English Language Testing System (IELTS)

IELTS was created to assess four language skill forms (speaking, listening, reading and writing) that are generally used in HLI settings (Peltekov, 2021) and considered a "gate-keeper" for many university admissions (Green, 2005). Each skill has a grading system where scores for each skill are averaged and an overall band score is provided. The overall band score is reported on a scale ranging from Band 1 (Non-User), Band 2 (Intermittent User), Band 3 (Extremely Limited User), Band 4 (Limited User), Band 5 (Modest User), Band 6 (Competent User), Band 7 (Good User), Band 8 (Very Good User) and Band 9 (Expert User) (IELTS, 2020). Most universities may require anywhere between a Band 5 and above for their undergraduate programmes.

The Common European Framework of Reference (CEFR)

There are two tests for CEFR. The first is the B2 by Cambridge English which comprises five areas of English language competence: Writing, Reading, Listening, Spoken Production and Spoken Interaction (EnglishProfile, 2015). Candidates are able to gauge their performance through the separate scores given for each component and the total averaged score indicating the overall test score (Cambridge English, 2022). A statement of results will be provided stating a grade along with CEFR level and certificates would be given to those who achieve scores above 160 (Cambridge English, 2022).

PTE Academic, which is the second test, is a computer-based English language test evaluating skills such as Writing, Reading, Listening and Speaking of applicants to ensure they have the language proficiency needed to study in an English-speaking environment (Ismail & Othman, 2020). The score report reflects an overall score, communicative score along with the enabling skill score. The language proficiency is ascertained by the overall score which ranges from 10 to 90 points and candidates' strengths and weaknesses are shown in the display of scores in a graph (Ismail & Othman, 2020).

The Test of English as a Foreign Language (TOEFL)

Karjo and Ronaldo (2019) emphasised that TOEFL iBT is developed to evaluate the English proficiency level of ESL / EFL students, to fully employ and understand it in an academic environment. ESL refers to English as a second language while EFL refers to English as a foreign language. Hence, those who have taken the tests are guaranteed to be better prepared than those who have not (Ismail & Othman, 2020). Reading, writing, listening and speaking are components of the test, and the overall score is 120 (ETS, 2022). As there is no indicator for passing and failing in TOEFL, it is up to the institutions and organisations to set their own conditions for the score (Ismail & Othman, 2020).

The ELS Certified Intensive English Program (CIEP)

CIEP in Malaysia was initiated by ELS Language Centres. It provides candidates a goal-oriented route to command the English language in a tertiary education environment (Ismail & Othman, 2020). There are 10 levels in total in CIEP and the level starts from 100 until 109, testing in the areas of Structure and Speaking, Reading, and Writing, and Skills Enhancement (ELS, 2022). Learners are equipped with English language fundamentals at the beginner (Level 100) and elementary levels (Level 101-103), they develop the language at the intermediate levels (Level 104-106), and they gain confidence in utilising the language as they move to the advanced levels (Level 107-109) and finally, be fully ready to embark on their tertiary education (ELS, 2022).

These standardised English proficiency tests rely and continue to rely on in-person face-to-face testing. There is a need for examiners to be present in a room with test-takers where mass testing takes place over a duration of time. During the COVID-19 pandemic, this method of testing could no longer be carried out due to safety measures that had been put in place by institutions. Not only that, but the World Health Organization (WHO) also had strictly instructed for global Standard Operating Procedures (SOPs) to be enforced and adhered to.

The COVID Pandemic and University Admission

The challenges of the pandemic on face-to-face testing

Most universities opted to temporarily avert all in-person contact and closed their campuses completely during the early stages of the pandemic as the complete picture of COVID-19 implication was still emerging. This decision impacted admission and enrolment on a local and global scale. Malaysia's 100 private universities and 340 private colleges enrol some 25,000 international students a year or 30% to 40% of all their students (Sharma, 2020) and the impact of temporarily closing campuses was clearly seen. The Malaysian Association of Private Colleges and Universities (MAPCU) indicated, via data collected early in 2020 through its members, that

nearly one fifth of Malaysia's 440 private tertiary institutions were in danger of closing down in that year (Sharma, 2020). These numbers were further exacerbated by the indefinite postponement of the compulsory language testing requirements for admission and enrolment into universities which have been purely face-to-face prior to the pandemic. It was a tried and tested system practised by universities worldwide that have always worked and have never been questioned.

Without a clear understanding of how COVID-19 spreads and what were the most effective measures to prevent it, gathering students into one room for a long duration was not regarded as safe. The challenges that this reality posed paralysed many institutions, which not only relied heavily on international students' enrolment but also utilised an English Language testing mechanism that required a face-to-face assessment upon entry into programmes of their choice. This was a predicament as test centres globally that conducted the tests were made inaccessible.

A number of measures were taken to circumvent this quandary. For instance, the Ministry of Education in China announced that English proficiency exams that Chinese students are required to take to get enrolled by foreign universities will be cancelled countrywide during the ongoing outbreak (Xinhua, 2020). The exams included IELTS and TOEFL. COVID-19 drastically upset the testing schedules for two of the most renowned standard tests for language proficiency in the world: TOEFL and IELTS (ICEF Monitor, 2020). This had critical repercussions in the students' admission requirements for their intended colleges and universities (ICEF Monitor, 2020).

IELTS suspended testing in dozens of countries and cities in line with official requirements and guidance from healthcare authorities (ICEF Monitor, 2020). Similarly, TOEFL also suspended testing in many places. Many educational establishments were looking into acceptable online, home-based, on-request alternatives for language proficiency testing to obtain some form of flexibility during this difficult period. Other than Mainland China, 33 countries including the United States were affected by this crisis. As there was no indication on how long the pandemic would last, there were numerous attempts to temporarily rectify the situation.

The implications of the pandemic on face-to-face testing

IELTS partners increased their test sessions in regions impacted by suspensions and enabled double paper-based testing in China. They also supported test takers with free preparation materials to help them get ready for their test and increased the frequency of computer-delivered IELTS test sessions (assessment is done on a computer at a center, e.g. computer lab) in affected areas up to three times per day, seven days per week. They proposed larger venues be used to accommodate increased volumes of test takers for paper-based IELTS. Flexible selection of Speaking Examiners

from around the world was also allowed to ensure test takers could complete their Speaking tests as quickly as possible (British Council, 2020). TOEFL was expected to introduce a home-based test in selected locations impacted by the coronavirus outbreak outside of Mainland China. Educational Testing Service (ETS) also worked closely with relevant government agencies and other partners in Mainland China so that they can provide a solution for test takers as quickly as possible there (ICEF Monitor, 2020).

The IELTS Indicator test, an online timed test, provided a quick fix amidst the chaos plaguing the enrolment and admissions into foreign universities. The IELTS Indicator was not accepted by many universities compared to the traditional IELTS, however, the scores were still able to get students into some universities that accepted the IELTS Indicator. Both IELTS Indicator run by IDP, and British Council test the four skills similar to the actual IELTS, but from the comfort of the applicant's home. With the IELTS Indicator offering a solution of sorts, many universities started considering new ways forward from this episode. Additionally, Industrial Revolution (IR) 4.0 enables rapid technological advancements in education which not only diversify online-based assessments but also improve their validity and reliability too (Ramasamy & Lee, 2022).

While the resulting pressure and stress in affected students during this difficult time is widely acknowledged, the development of seamless testing is still in its infancy. Many institutions were under pressure to come up with alternate ways of assessing English-language proficiency during this time, even if they did not meet high standards for assessment quality or security. While TOEFL and IELTS boards worked at ensuring that online testing solutions will not compromise standards, premier institutions continued to innovate.

Noting the importance of finding an alternative for assessing English language proficiency during the pandemic, the private university in this study (thereinafter referred as 'the University') started looking at ways forward. Leveraging its resources and tapping on its established learning management system site that runs all its mainstream modules, the University used its integrated learning system (Moodle) as a sustainable measure for language testing where the English Entrance Exam was concerned. Moodle, a virtual learning space created by Martin Dougiamas, has progressed over time to accommodate various language learning environments (Tharumaraj et al., 2021). Guided by Alessi and Trollip's instructional system design model (2001), the University developed a testing solution that did not compromise on its entry placement standard and adhered to the temporary government shut-down policies to contain the spread of the COVID-19 virus (Ockey, 2021). Adapting to a stringent IELTS testing format, students had to be tested within a short period of time with instructors on board to test and mark scripts so that students could be placed accordingly in their programmes within the stipulated period. In addition,

students were streamlined into programmes or Intensive English (IEN) programmes if the required band was not met.

Alessi & Trollip's Instructional System Design (ISD)

Alessi and Trollip's three-phase Instructional System Design (ISD) approach — Planning, Design, and Development —was used as the background to design the EET platform because of its precise and comprehensive development scheme from paperwork to the final result. Alessi and Trollip emphasised the importance of event sequencing and advocated using storyboarding to enhance learner pilot testing (Hunter & Ellis, 2000). Cognitive psychology elements, such as perception and attention, encoding, memory, understanding, active learning, and individual differences, underpin this paradigm (Alessi & Trollip, 2001). The model was founded on the premise that instruction should be viewed through the learners' eyes instead of traditional educational approaches, and framed through the subject matter's lens. The Alessi and Trollip model was also used by Universitas Darussalam Gontar in developing their web-based online IELTS reading test for their students (Rokhaniyah & Putra, 2021).

Methodology

Stages of the English Entrance Test (EET) Development

English Entrance Test (EET) is an internal English test conducted as a paper-based test developed by the University's Language Centre. The EET (consisting of grammar, reading, writing, and listening) has been used as an English entry requirement for some schools for undergraduate and postgraduate admission. The EET paper-based test is carried out on-site by counsellors. Once the test takers had completed the test, the counsellors would send the papers to the admin officer at the Language Centre who then passed the papers to the examiners to be marked. The papers had to be marked within 48–72 hours and passed back to the admin officer who would submit the scores to the counsellors for admission purposes. Due to COVID-19, conducting the paper-based EET became a challenge. Hence, EET was converted to an online exam using Learning Management System (LMS). The conversion process involved a few stages based on the three-phase Alessi and Trollip Instructional System Design (ISD) model (Alessi & Trollip, 2001; Por et al., 2012): Planning, Design, and Development. The EET development stages of the University will be discussed in detail next.

Stage 1: Conceptualization process (Planning phase)

The first phase in the Alessi and Trollip ISD model is the planning phase which requires appropriate groundwork to make sure all aspects of the system flowed efficiently. For this study, this phase included meeting with the team of lecturers to decide on the format of the online test, the setting of the questions and deciding how candidates would access the

test. Other stakeholders involved in this phase were counsellors, E-Learning Department (eLA) and Office of Admission to ensure the process was aligned with the University's policies.

The set of questions for the online EET was selected from the collection of paper-based EET in the system. The questions were benchmarked against IELTS and TOEFL. The online EET consists of three skills: reading, writing, and listening. The grammar component was removed because grammar is tested via application in the writing component. The speaking test was not part of the paper-based assessment of the University, thus was not included in the online EET assessment as well. Apart from this, the test was in line with other international universities such as the University of Pittsburgh which only included reading, writing, and listening for their English entrance examination (University of Pittsburgh, 2022). In Japan, the standardised university entrance assessment only examines English reading and listening skills (Kyodo, 2019).

After a series of meetings with stakeholders, it was decided that the university's LMS platform would be suitable to run the test and that there would be two sets of assessment papers. The second set would serve as a backup in case of bad internet connection or a glitch in the system during the first attempt.

The University researchers' use Moodle version 3.4 which is a user-friendly LMS for students and staff. The LMS is designed to support teaching and learning materials and activities to be delivered through a one-stop centre that offers users the convenience of 24/7 anytime and anywhere access. Moodle provides several interactive activities, including forums, wikis, quizzes, surveys, chat, and peer-to-peer activities that enable learners to share resources, as well as work and learn together. Its learning content offers a mix of media, including text, images, audio, video, and interactive learning objects, which will engage learners in their learning.

In this stage, a timeline was prepared to ensure the project would be ready for implementation as the University's entrance test was scheduled to start in July 2020. Table 1 shows the tasks assigned to the respective departments.

Table 1. Relevant departments and tasks assigned

Department	Tasks
Office of Admission	• Provide process flow for the EET registration • Identify candidates for EET pilot test 3
Counsellor	
Language Centre	• Develop the content of the test • Design the layout for the EET module site • Conversion from paper-based to online-based test in LMS • Conduct pilot test 1 for content and technical checking by Language Centre • Conduct pilot test 2 with enrolled students and e-Learning Department staff for content and design assessment • Conduct pilot test 3 with candidates for the full process of EET
e-Learning Department	

Stage 2: Design process (Design phase)

The design phase, according to the Alessi and Trollip model, involves creative work such as content design and layout. The module site needed to have self-explanatory features to guide the candidates before attempting the exam. For this phase, the e-Learning specialists were included to create the design.

The online EET was developed in April 2020 and was ready for testing in May and June 2020. The module site was created and designed by the e-Learning specialist team after discussions with the Language Centre on the suitability of the site.

After the questions had been selected, the test was uploaded into the LMS using the quiz features in Moodle version 3.4. The type of questions used for the online EET was multiple-choice, gap-fill and essay. The EET module site starts with a banner, description, and instructions to candidates. A collapsed topic format was used for the test to ensure candidates can follow the test flow sequence (Figure 1).

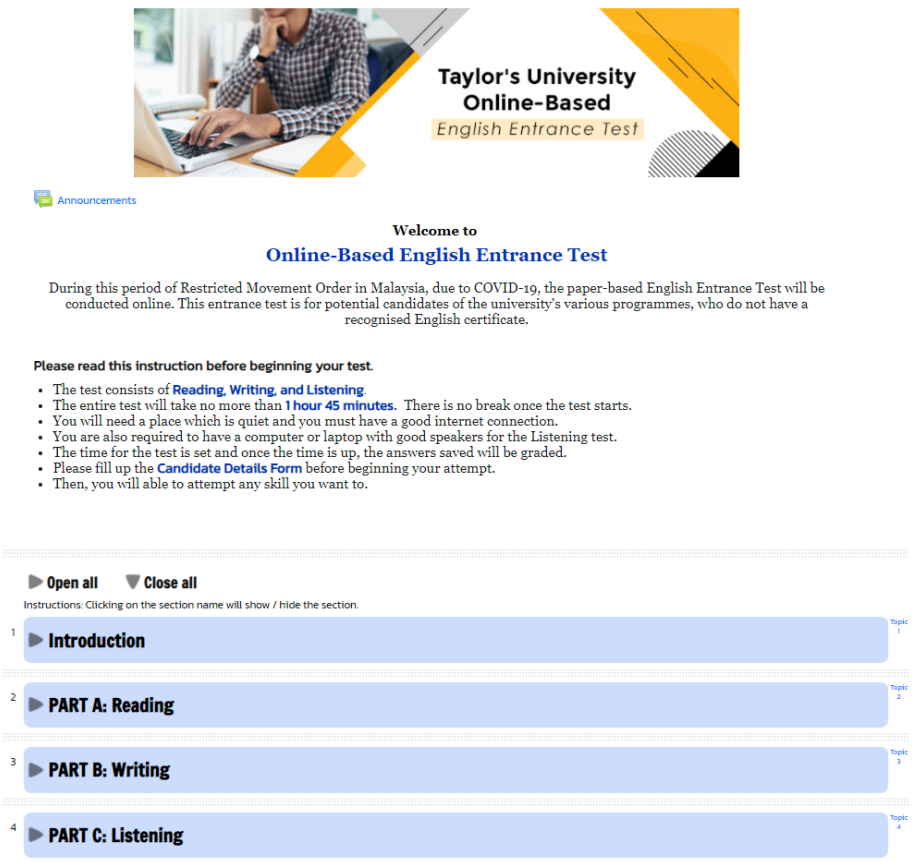

Figure 1. Online EET module site

The first collapsed topic, titled Introduction, collects candidates' information such as full name and identity number. This section was made compulsory before the student can take the EET. After completing this section, candidates need to answer each part of the test in sequence, starting from PART A: Reading to PART C: Listening.

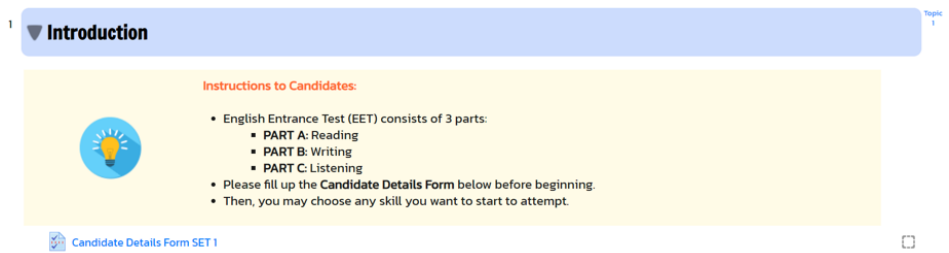

Figure 2. Introduction section in the EET module site

PART A: Reading consists of 2 passages, and candidates need to answer this part within 40 minutes. The first passage consists of 15 multiple-choice questions. Meanwhile, the second passage includes fill-in-the-blank, drop-down options, and multiple-choice questions. The test would automatically be submitted after 40 minutes. This feature was set to secure a candidate's attempt after the allocated time is up.

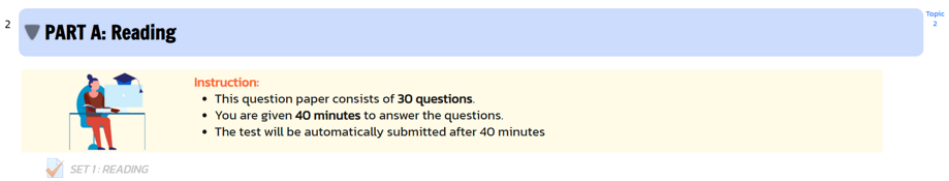

Figure 3. PART A: Reading section in the EET module site

The second part of the EET is PART B: Writing. Two topics are given as two separate questions for candidates to choose from. Candidates need to click on their chosen topic and answer it in about 250 words in the answer section. Thirty minutes is given to the candidates to complete this section.

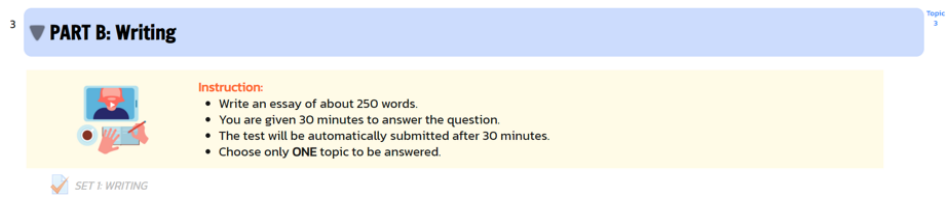

Figure 4. PART B: Writing section in the EET module site

PART C: Listening is the third skill candidates need to be tested for EET. The listening part involves three audio files played once for the candidates. Each audio consists of 10 questions with different types of questions, such as short answers and multiple-choice questions. Candidates are given 30 minutes to answer this part, and the attempt will automatically be submitted when the time is up.

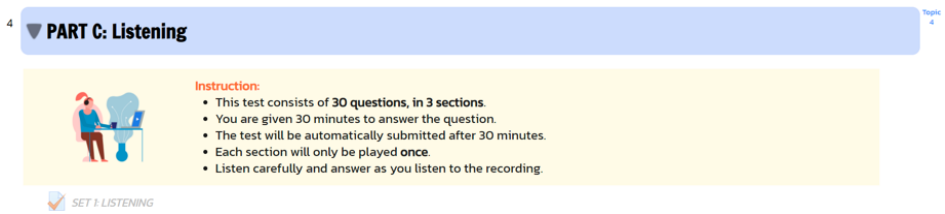

Figure 5. PART C: Listening section in the EET module site

PART A and PART C have been set to be automatically marked by the system once the attempt is submitted. Candidates cannot review their marks because the test provider disabled this feature. This automatic marking saves a lot of time that needs to be spent by the examiners. However, examiners still need to mark PART B: Writing and add the marks into the system. Once the design, layout and technical setting was ready, the process could move to stage 3.

Stage 3: Development process (Development phase)

The last phase in ISD is development. In this phase, materials were assembled and uploaded into the LMS. Pilot testing was required to test instruments like questionnaires, interview questions (Van Teijlingen & Hundley, 2002) and written tests. For the written test section, the team ensured that the questions were well written and the time provided for answering was adequate. Another pilot test was conducted to iron out technical issues to solve any problems arising from the issuance of the test to manual online marking. Both these pilot tests were required to validate the system and to rectify or resolve any emerging issues. A final pilot test was conducted to test the entire system from assigning the candidate an ID to access the LMS and to sit for the test, to the manual marking of the essay component and the entry of the band acquired onto a file in Microsoft Teams.

In the first pilot test, the questions and module site were checked by a group of lecturers to ensure that there were no spelling and system errors (Rokhaniyah & Putra, 2021). The feedback from the team was:

- PART B: Writing could cause confusion to the students as the system indicated that both essay questions need to be answered.

Therefore, the test was amended by including both topics under one question and changing the wordings of the instruction to clearly indicate that the candidates had to choose only one topic. After the amendment, the module site was ready for pilot test 2.

The second pilot test involved two stakeholders: the eLA department and students. The eLA department's task was to test the module site to find errors in the system and the students were to test the online EET in April 2020. The students were selected based on the criteria below:

- Not familiar with the usage of LMS
- Never taken a quiz in LMS
- Intermediate English proficiency level

The eLA department enrolled the selected students in the online EET module site a day before the actual test. A time slot was given to the students to sit for the exam from 3.30 pm to 5.00 pm. After the candidates finished the test, examiners logged into the EET module site and marked the test. As reading and listening are marked automatically by the system, the examiners only marked PART B: Writing. Marks were entered manually in the LMS and onto a secure folder in Microsoft Teams which could be accessed by the internal stakeholders. According to the feedback provided by the stakeholders, the design and layout were easy to follow but some comments were made that needed to be addressed such as:

- to remove the restriction of completing each part before moving on to other parts, so students can choose to do any part in any sequence
- to change the setting for each quiz to 'Automatically submit once attempted.'

After the amendments were made to the system, the online EET was ready to be tested again at the university level. This test was to check the whole process from the beginning to the end. Stakeholders were informed via email and candidates for the third pilot test made the first attempt in June 2020. The process flow tested in pilot test 3 is shown in Figure 6.

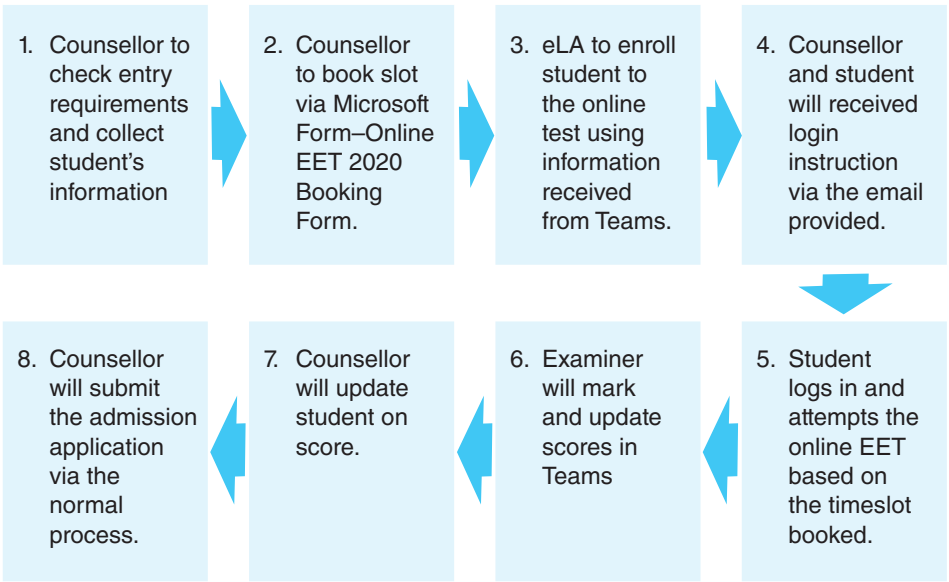

Figure 6. The full EET process tested in pilot test 3

Table 2 shows feedback on the third pilot test from the stakeholders. After the amendments were made and all the stakeholders were satisfied with the final product, the online EET test was ready to be utilised for the university entrance test beginning July 2020.

Table 2. Stakeholders' feedback for the pilot test 3

Stakeholders	Feedback
Counsellor	• To enable counsellor to access EET module site
Students	• No feedback provided
eLA Department	• Counsellor to email eLA for EET candidate enrolment
Examiners	• To be notified of online EET marking

Findings and Discussion

Based on the three stages that were carried out to develop the online EET test, the stakeholders established a process that would ensure the smooth running of the University's entrance test. The updated process flow is shown in Figure 7.

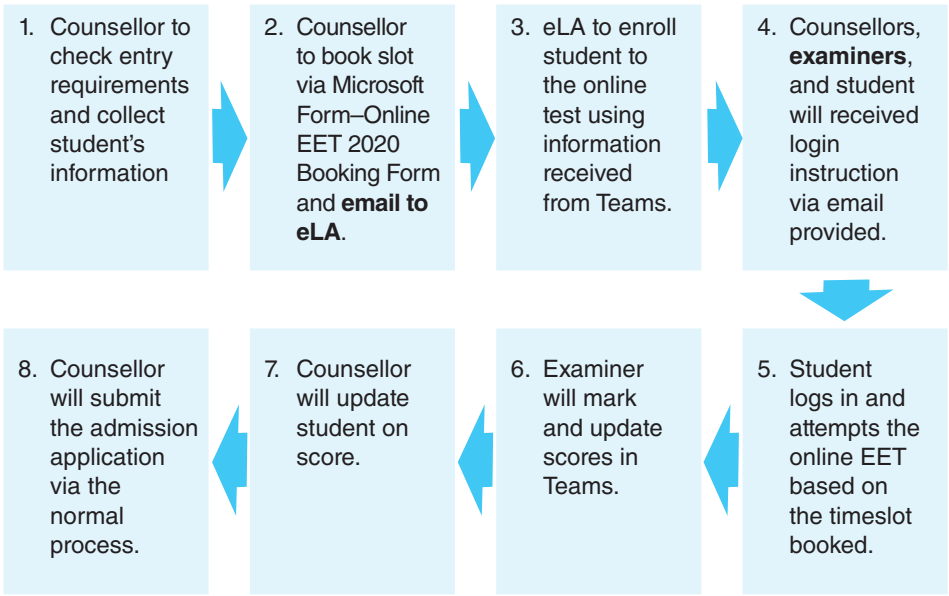

Figure 7. EET final process flow

The new EET process utilising Microsoft Teams features ensured that the process of test enrolment is smooth, fast and time-saving especially for marking and updating candidates' marks. Besides this, steps 5 & 6 for online EET could be done within 24 hours compared to the paper-based test marking process which needed between 48 to 72 hours after candidates had finished their test. The impact of automatic marking for Reading and Listening skills was a key feature for saving time. Besides that, lecturers were also familiar with the Moodle version 3.4 platform which made the process smoother.

The front-end layout also played a big role in the online EET development. The eLA team provided a relevant layout to be used on the module site. A banner with a man sitting in front of a laptop was chosen as the official banner to show that the exam was conducted online. Soft blue and yellow colours were selected for the topic and instruction sections. According to Rick, Tara, and Donna (2014), the layout and colour of module sites can have a significant impact on on-screen readability text. Therefore, the EET module site used a pastel colour scheme and graphics to ensure candidates' retention of focus during their test.

According to Van Teijlingen & Hundley (2002), pilot tests should involve both pre and final pilot tests. The final pilot test needs to be conducted to test the whole process. Based on the ISD model, at least two tests were conducted in the development phase. Therefore, the rigorous pilot testing ensured that candidates found the EET test to be easily accessible, understood and navigated.

However, one of the drawbacks of online tests is the absence or lack of good internet connectivity (Chaplot, 2016; Rokhaniyah & Putra, 2021). The online EET test site faces the same issue. Poor network availability could affect the smoothness of the website access; thus, leading to a poor experience of the exam process for the candidate.

Furthermore, even though the online EET has been designed to be user-friendly, there may be test takers who may not be familiar with the technology used for online tests. In addition, those who are less proficient in the English language may not be able to comprehend the instructions which are stated in the English language. As such, providing candidates with a run-through of the test via instructional videos (Muhammad & Ockey, 2021) would help them to navigate the system. This would also ensure that there are no external factors that may contribute to the candidate not performing well.

Additionally, including a Speaking skill assessment could provide a better assessment of the candidate's "interactional competence" (Galaczi & Taylor, as cited in Muhammad & Ockey, 2021) and a more accurate assessment of the candidate's language proficiency across all four skills rather than the three skills currently assessed in the online EET. This could be done synchronously via "synchronous video-mediated online assessment" (Ockey, 2021), or asynchronously via a recording of the candidate speaking for a specified duration of time on a given topic. For greater security purposes, verification of candidates' identity could be done by making it compulsory for candidates to display a photo identification at the start of the exam.

Aside from this, the current online EET is not proctored. Proctoring at-home assessments may provide greater reliability of the test score and reduce occurrences of misconduct. Some common forms of proctoring used in universities that could be considered include "*Passive monitoring of software on students' computers, Active restriction of software on students' computers, Passive video surveillance of students, and Active video surveillance of students*" (Grajek, 2020). Furthermore, proctoring can be conducted more easily with the wide variety of monitoring approaches available (Ockey, 2021). However, proctoring may give rise to issues of privacy concerns and rights issues, causing undue anxiety that may affect candidates' performance in the test. Therefore, all implications of proctoring at-home assessments should be carefully weighed before deciding on making ETT a proctored test.

The current practice of using traditional automated scoring for the Listening and Reading sections generates instantaneous scores. However, as the writing section is marked by a human examiner, the overall score is not instantaneously available to administrators. In order to cut down on the time taken to generate the overall score, the adoption of Artificial Intelligence (AI) could be considered.

Nevertheless, the implementation of AI should not be embraced in haste as its suitability for the university should be thoroughly examined. Firstly, is there sufficient

input of big data to be used as training data to drive and develop the auto-marker to ensure accuracy of auto-marking? Secondly, would biases in marking be eliminated or promoted with the use of AI scoring? Differing arguments on the existence of biasness exist whereby test providers using AI scoring like PTE Academic, Linguaskill and Versant, claimed that AI eliminates human bias in marking (Clesham, 2019), while the claim that AI is biased is supported by MIT researchers (Hao, 2019) and IDP Australia (IELTS, 2021) which has yet to implement AI scoring of the IELTS exam. Hence, these questions would need to be addressed before jumping on the bandwagon of AI scoring.

Conclusion

The COVID-19 pandemic set in motion a major shift in education from being reliant on paper-based tests to online tests and from standardised examinations to developing one's own online assessments to determine potential students' eligibility to enrol into a programme. The successful implementation of the online EET at the University is evident in the high number of enrolment and placement of students in its university-wide programmes since its inception and execution in the second quarter of 2020. While the move to design the online assessment may have been driven by the COVID-19 pandemic, the outcome has been positive especially in strengthening resources. The online EET has made the entrance assessment accessible to potential local and international students who may otherwise encounter difficulties in enrolling for a programme at a university without a standardised English exam result. Furthermore, the evaluation and enrolment of these students can be carried out with as little disruption as possible in the event of a crisis such as the recent pandemic. In fact, it is definitely a tool that can be used post-COVID due to the benefits it has already brought to the University. Its anytime-anywhere ability, time-saving ability and ease of usability, makes it a valuable assessment tool, especially in times of distress and uncertainty. In fact, this development has presented more potential innovative opportunities to explore in the area of assessment for the University.

As countries start to transition from the pandemic to the endemic phase, it remains clear that amidst times of uncertainty and unpredictability, having ownership of an online entrance assessment is advantageous towards having greater control of the admission of potential students into a university programme. What needs to be prioritised in any case, is its security, validity, and reliability. This endeavour initiated by the private university in this study has certainly presented many challenges inasmuch as it unearthed new possibilities. Moving forward with instructional videos, synchronous video-mediated online assessments and AI proctoring in the pipeline, it is anticipated that a more robust system will emerge in the near future.

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