



FORCED TRANSITION INTO ONLINE ASSESSMENTS: EXPLORING PERCEPTIONS AND CHALLENGES AMONGST PHARMACY STUDENTS

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Abstract:

In the wake of COVID-19 pandemic, most educational activities have been forced to resumed through online and distance learning. As part of the curriculum objectives, online assessments are carried out to assess students' comprehension and to evaluate the effectiveness and quality of the teaching and learning process. Many students were heavily affected by these sudden transformations from traditional face-to-face (F2F) to forced online assessments. Thus, making it intriguing for academics to explore students' experiences of online assessment at the higher education level. Our study investigates students' perceptions and challenges faced of online assessments. A cross-sectional study was conducted by distributing questionnaire to pharmacy students at Universiti Teknologi MARA (UiTM), Kampus Bertam through online Google Form. Data obtained from the questionnaire which consisted of demographic information, perceptions and challenges of online assessments were tabulated and analysed using Microsoft Excel and SPSS. Our findings on perceptions revealed that online assessments were conducted in many ways (92.3%) and using multiple platforms (91.6%). Online assessments enhanced self-learning (89.5%), convenient and flexible (86.0%) and faster compared to paper assessments (78.3%). Nevertheless, respondents stated that online assessments are neither applicable for all courses (70.6%) nor for all students (60.8%) whilst 86.7% of respondents stated the vulnerability of online assessments to cheating. Likewise, most students indicated distractions at

home or from others (86.0%) as the challenge of online assessments followed by difficulties in answering questions within time limit (76.9%), lack of motivation (75.5%) and do not have enough time to check all answers (72.7%). Suggestions from respondents to improve online assessment approaches include allocating more time during assessment, increase engagement and feedback between students and lecturers and tighten up security to prevent students from dishonesty. In general, the study illustrates the acceptance and the constructive approach of online assessments amongst students. Though, the challenges encountered need to be acknowledged and resolved accordingly.

Keywords:

Assessment, Challenges, Online, Perception, Students

Introduction

The emergence of infectious coronavirus disease (COVID-19) has become a threat to human activities and lifestyles which impacted their health, economy and education. The novel virus COVID-19 was announced as a global outbreak by the World Health Organization (WHO) in March 2020 as it began to spread worldwide including in Malaysia (Thomas et al., 2021). The Movement Control Order (MCO) was enforced to prevent and contain further spread of COVID-19 (Elengoe, 2020). Concerning this matter, the regulation has forced the closure of all industries in Malaysia including educational institutions (Muthuprasad et al., 2021). Hence, the educational institutions in Malaysia were forced to change the method of learning from face-to-face (F2F) to online and distance learning (ODL) (Iskandar et al., 2021).

ODL is an alternative way of delivering education to students by using internet access and other information technologies available (Harefa & Sihombing, 2021). Various types of online platforms have been used by educational institutions to replace conventional learning methods such as Google Meet, Microsoft Teams and Zoom (Iskandar et al., 2021). These online platforms provide two types of online teaching-learning styles which are synchronous and asynchronous methods (Almahasees et al., 2021). Synchronous online learning involves an online class session such as a live online meeting with participation and engagement between students and educators in real-time. Though, asynchronous online learning provides access to the learning materials such as the pre-recorded lecture videos at the time suits them without direct communication with their educators (Mairing et al., 2021). Thereby, the shift of conventional educational methods into ODL has prompted the implementation of online assessments.

The practice of online assessment is an important element in the educational process to ensure the students and educators accomplish academic outcomes even during the epidemic (Iskandar et al., 2021). This is because online assessment is one of the applicable strategies to assess students' knowledge throughout the online learning sessions. Besides, the results of the assessment can assist lecturers in improving their teaching methodologies and materials to provide effective teaching-learning styles and an ideal educational setting for the students (Yulianto & Mujtahid, 2021).

Nevertheless, the implementation of online assessment has its advantages and shortcomings. For instance, online assessment is convenient for students because they can take it at anytime

and anywhere that suits them (Peytcheva-Forsyth & Aleksieva, 2021). Likewise, students can complete the online assessment in a short time and obtain instant results and feedback compared to the conventional assessment style (Hanafy et al., 2021). Despite its benefits, studies have shown that some students faced challenges in completing the online assessment such as having poor internet connectivity, lack of incompatible devices and academic dishonesty (Peytcheva-Forsyth and Aleksieva, 2021). These limitations will affect the smoothness of the online assessment process and influence students' performance and progression. Therefore, students' perceptions towards online assessment are vital issues that need to be discussed because their viewpoints are crucial in providing suitable approaches for online assessment implementation. The objectives of this study are to explore and investigate the perceptions and challenges experienced by pharmacy students in relation to forced online assessments. Therefore, this study will address the following research questions:

- 1) What are the pharmacy students' perceptions on online assessments?
- 2) What are the challenges encountered during their online assessments?

Literature Review

There are two topics and two subtopics that will be discussed in this section, respectively. The topics include online and distance learning and online assessments. Two subtopics are elaborated from online assessments topic namely, benefits of online assessment and challenges of online assessment.

Online and Distance Learning (ODL)

Online learning is classified as one of the e-learning methods and is known as web-based learning via the internet (Ozden et al., 2004). Online learning is defined as the use of electronic technology and media to supply, aid and enable learning and teaching and communication between learners and educators via online information (Howlett et al., 2009). Online and distance learning (ODL) has a vital role in sustaining and preserving education, especially after the outbreak of COVID-19. Most academic institutions decided to shift the current physical pedagogy approach to ODL. Malaysia took the initiative to continue teaching and learning using the ODL mode. Thus, the dependence on internet availability and connectivity is high to facilitate the teaching and learning process (Izhar et al., 2021).

ODL is perceived as a pleasurable method of learning and has a favourable influence on both students and educators (Kulal & Nayak, 2020). However, there are significant drawbacks to ODL which include less social engagement, lack of social presence and communication synchronization (Bali & Liu, 2018). Lack of technical support and limited accessibility, set-up costs and poor information technology skills by students and educators are some of the disadvantages of ODL (Howlett et al., 2009). However, Harefa & Sihombing (2021) demonstrated that traditional face-to-face learning is often more engaging for students whilst Thomas et al. (2021) discovered that the students prefer classroom teaching over online learning. In contrast, Amir et al., (2020) illustrated that the perceptions and acceptance of students toward ODL have been more positive and encouraging. Nevertheless, online learning can be a beneficial supplement to traditional learning (Howlett et al., 2009) since it can diversify learning and teaching techniques.

Online Assessments

Assessment is crucial for an educational institution to determine whether the goals and objectives of education are being met. Therefore, to support the need and purpose for the assessments, it needs to be continued even as the world goes through a pandemic of COVID-19. Since the learning process is held online according to the advice of the ministry (Iskandar et al., 2021), the assessment also needs to be continued online. Online assessment can be defined as a method of conducting a test online to evaluate students' performance and knowledge in a particular subject (Iskandar et al., 2021). The key distinction between traditional assessments and online assessments is traditional assessments require students to sit in a physical classroom setting (Meccawy et al., 2021), compared to online assessments that utilised computer-based systems (Ozden et al., 2004).

Assessments can be categorised into two which are formative assessment and summative assessment. Formative assessment is conducted throughout the teaching and learning process and educators analyse and solve concerns and problems encountered by students based on the outcomes and feedback acquired from various assessment tasks (Rawlusyk, 2018; Ridhwan, 2017). On the other hand, summative assessment is used to evaluate students' performance and takes place at the end of a teaching cycle. Therefore, they are solely used to determine students' grades and achievements. Since the assessments are administered online, they are typically conducted via a computer-based system which includes the internet, website and platform usage. Online assessments can be carried out on various platforms such as Google Forms, Google Classroom, Kahoot, WhatsApp, Telegram, YouTube, Zoom Meetings, Webex and many other platforms (Aina & Ogegbo, 2021; Perwitasari et al., 2021). Instead, many higher education institutions and universities do provide their own learning management system (LMS) for online learning and assessments platforms which ensures only those who are currently enrolled in the institution are eligible to use the platform. UFUTURE is an example of home-grown LMS developed by UiTM (Othman et al., 2022).

Benefits of Online Assessments

Shifting from paper-based test traditional assessments to a fully online and computer-based assessment can be quite challenging because of widely practice face-to-face methods in conducting assessments (Meccawy et al., 2021). Nevertheless, online assessments can provide students, educators and institutions with many benefits and convenience rather than traditional assessments. Firstly, useful feedback could be provided to all involved parties (Joshi et al., 2020) whereby students can obtain immediate feedback such as scores and answers. Therefore, students will be encouraged to do well in future examinations to improve their performance (Ozden et al., 2005). Alruwais et al. (2018) claimed that online assessments can help promote students' learning and boost their performance apart from providing direct and quality feedback to the instructors as well (Yoestara et al., 2020).

The results of the assessments may be delivered instantly with auto-scorable questions, allowing educators to detect and evaluate students' misconceptions and misunderstandings (Alruwais et al., 2018). Hence, educators can provide explanations and clarification to solve any questions and confusion (Alruwais et al., 2018; Hmdi, 2011) related to the questions and syllabus to strengthen students' learning comprehension. Educators can track students' progress insight throughout the learning and assessment process, with that they are able to identify and analyse concerns across the working progress and assessments thus they can plan and provide better teaching strategies (Aina & Ogegbo, 2021; Joshi et al., 2020). This can aid

the institution to make key decisions and help identify opportunities for improvement of academics and education in near future.

Higher flexibility is another benefit of online assessments. Students can perform online assessments at any time and from any location based on a given timeframe (Donovan et al., 2007). Since they can adjust and personalise their own study schedule (Osuji, 2012), they will have ample time to study and take the assessment when they are completely prepared. Many students believed that being in their own houses makes them feel more at ease and comfortable (Peytcheva-Forsyth & Aleksieva, 2021). Additionally, this can provide benefits and opportunities to students who face difficulties and are unable to attend traditional assessments due to disability, distance, illness or work and family obligations (Osuji, 2012). Extra time can be easily added to the assessment software application for selected students with disabilities, creating fairer and more transparent assessments. Furthermore, educators can diversify the assessment methods and formats that suit the students such as by including simulated videos and audios (Joshi et al., 2020).

Likewise, online assessments can save money and time. Students do not have to travel back and forth to the examination venue (Sadeghi, 2019). Therefore, transportation and accommodation expenses can be reduced (Ali & Dmour, 2021). Online assessments have proven to be cost-effective by lowering the expense of administering examinations (Ridgway et al., 2007) whereby the use of paper and ink to print question papers and distribute them to candidates is both costly and time-consuming. Moreover, test papers and answer scripts do not need to be transported and posted to the examiners, thus eliminates answer scripts and examination papers lost and damage. Since assessment papers are auto-scorable, educators' workload and marking time can be reduced (Baleni, 2015; Osuji, 2012). Baleni (2015) illustrated that about 85% of students were more inclined toward online whilst Howe (2020) stated that both students and lecturers were in favour of online assessments.

Challenges of Online Assessments

The main challenge of online assessments was the lack of infrastructure and technical support. Internet connectivity and availability are the main sources for online assessment (Baczek et al., 2021) to run smoothly. Limited internet access has a substantial negative impact on students to complete and submit assessments on time (Iskandar et al., 2021). This is because students require a longer time (Donovan et al., 2007) to access assessment tools, information, websites, software and upload and download materials online. When the internet connection was poor or unstable, students struggled to complete the online assessments (Azmina et al., 2017). Additionally, many students do not possess the requisite hardware and software (Baczek et al., 2021). This complicates online assessment even more since it depends greatly on the use of gadgets and electronic devices (Peytcheva-Forsyth & Aleksieva, 2021; Sadeghi, 2019) such as laptops, computers and smartphones to work properly. Likewise, students need additional funds to purchase compatible devices (Mukhtar et al., 2020) with various methods of online assessments being conducted and significant internet usage necessitate students to purchase additional data or internet plans (Perwitasari et al., 2021). Other technical issues that interfere with the assessment process include device malfunction and breakdown (Sadeghi, 2019) and the absence of an electrical connection. Peytcheva-Forsyth & Aleksieva (2021) disclosed that with a lack of digital devices and the internet, students find it more difficult to complete online assessments efficiently.

According to Iskandar et al. (2021) and Khan & Khan (2019), students who lack sufficient technical knowledge and skills may find it difficult to use online assessment tools proficiently since they are unfamiliar with electronic equipment and assessment tools (Baczek et al., 2021; Alruwais et al., 2018). Typing speed and computer literacy are crucial to completing the assessment within the specified timeframe. Students may not have adequate time to answer the questions if they encounter these problems (Ali & Dmour, 2021). Khan & Khan (2019) indicated that many students needed more time to type answers online rather than write them on paper whilst some complained that they could not concentrate or think of answers while typing. Moreover, educators also lack expertise and capabilities in handling online assessments and would have a negative impact on students (Khan & Khan, 2019).

Finally, academic dishonesty was the major concern of online assessment and the hardest challenge to tackle. Cheating, fraud and plagiarism are easier to commit due to technological advancements and internet accessibility (Meccawy et al., 2021; Khan & Khan, 2019). Educators cannot directly supervise students' movements and activities during online assessment commencement as they have no control over the assessment setting. Consequently, there was a higher likelihood of academic dishonesty (Iskandar et al., 2021). Some of the methods used to cheat in online assessments include obtaining information and answers from the internet, referring to notes and books, using applications to solve mathematical problems or asking for help and answers from family and friends (Iskandar et al., 2021). Meccawy et al. (2021), stressed that there is no certainty that the enrolled student is the one who completes the task. Plagiarism has also been a concerning issue whereby students underestimate this and believe that copying and pasting other people's work from several internet sources was not wrong. Moreover, some students plagiarise by neglecting to provide credit for the work or ideas of others (Meccawy et al., 2021) and this was supported by previous findings from Hmdil (2011).

Methodology

Study Design

A cross-sectional study with an online survey questionnaire was conducted among pharmacy students of Universiti Teknologi MARA (UiTM) Cawangan Pulau Pinang Kampus Bertam from March until April 2022. Respondents were selected based on their willingness to participate in this research. Sample size was determined using Raosoft sample size calculator. The recommended sample size based on 90% confidence level, 5% margin of error, 50% response distribution for a population size of 300 students is 143. Convenient sampling was used for this study and 143 responses were successful collected.

Data Collection

The survey questionnaire used in this study was adopted and adapted from Iskandar et al. (2021), and likewise, all the questions used were sourced from the same authors. The online survey questionnaire formed using online Google Form was used to collect the data from respondents. All respondents were requested to complete the survey through a questionnaire that was sent through WhatsApp with request letters for their responses (Othman et al., 2022).

The online survey questionnaire comprised three sections which include demographic information, perceptions and challenges regarding online assessments. The first section comprised of demographic information about gender, age, area of residence, semester of study,

experience in online assessments and devices used for online assessments. The second section comprised of 22 close-ended questions (Yes/No response) to gain insight into students' perceptions towards online assessment. The third section contained 13 close-ended questions (Yes/No responses) related to the students' challenges in facing online assessments. In addition, an optional open-ended question was also included in the third section where respondents were asked to share their suggestions to improve online assessment implementation.

Data Analysis

The term frequency (n) refers to the total number of respondents (n= 143). The frequency (n) and percentage (%) were applied to analyse the collected data. The Statistical Package for Social Sciences (SPSS) version 26 software was applied to perform the relevant statistical analysis. The respondents' details on demographic information, responses on students' perception towards online assessment and students' challenges on online assessment were presented in a table with percentages (%).

Results and Discussion

Demographics of Respondents

A total of 143 responses were collected whereby females (84.6%,121) outnumbered males (15.4%, 22). Age of respondents ranged from 18 to 23 years old. Half of the respondents lives in sub-urban (50.3%, 72) followed by urban (25.9%, 37) and rural areas (23.8%, 34), respectively. Regarding the devices used for online assessments, most respondents used mobile phones (139) and laptops (131) used laptops whilst the remaining 17 and 3 respondents used tablets and desktops, respectively. Additionally, almost all respondents have prior experience with online assessments (97.9%, 140) compared to only 3 of respondents that do not experience online assessments (Table 1).

Table 1: Demographic of Respondents

Description	N (%)
Gender	
Male	22 (15.4)
Female	121 (84.6)
Area of residence	
Urban	37 (25.9)
Sub-urban	72 (50.3)
Rural	34 (23.8)
Previous online assessment experience	
Have experience	140 (97.9)
No experience	3 (2.1)
Device used for online assessments*	
Mobile phones	139 (97.2)
Laptops	131 (91.6)
Tablets	17 (11.9)
Desktops	3 (2.1)

*Notes: *Multiple responses possible. Therefore, the total may exceed 100%.*

Students' Perceptions of Online Assessments

This section consists of 22 statements regarding students' perceptions of online assessments as listed in Table 2. More than ninety percent of the respondents agreed that online assessments are conducted in various ways (92.3%, 132) using multiple online platforms (91.6%, 131). Joshi et al., (2020) stated that educators can apply various assessment methods and formats that suit the students. Many available online LMS have been utilised worldwide to conduct online assessments (Aina & Ogegbo, 2021; Perwitasari et al., 2021) whereby information such as the requirements, marking rubrics and dates of completion could be set and made known to students. Similarly, UFUTURE, the home-grown LMS developed by UiTM (Othman et al., 2022) serves as a platform for online assessments for their educators. Next, most respondents concurred that online assessments enhanced self-learning (89.5%, 128), convenient and flexible (86.0%, 123) but is vulnerable to cheating (86.7%, 124). Online assessment could be accessed anytime and anywhere (Donovan et al., 2007; Dochy et al., 1999). This approach helps students in remote areas to study and to be assessed at their own localities (Ridgway et al., 2004; Osuji, 2012). As the online assessments are prone to be manipulated, strict proctoring is needed to maintain academic integrity. The use of web cam and screen capture functions could be utilised (Azzman & Najib, 2021; Mukhtar et al., 2020). Hylton et al., (2016) showed that students who observed proctoring took a longer time to complete the assessment while the non-proctored student scored higher in the assessment. Likewise, more than seventy percent of respondents stated the online method is faster than paper assessment (78.3%, 112), improves their technical skills (72.0%, 103) and provides fair or unbiased evaluation (72.0%, 103). Alruwais et al. (2018) highlighted that electronic type of assessment is easier and faster to use and sometimes more authentic because the human element is set aside while marking students' responses (Wiggins, 1990). Similarly, online assessment supports high-level thinking skills like problem-solving and facilitates teamwork projects (Ridgway et al., 2004).

Additionally, many respondents favoured online types of assessments tools (74.8%, 107) and a handful of respondents (64.3%, 92) favoured online assessment than the traditional method. Our findings are in line with Donovan et al. (2007), Gilbert et al. (2011), Baleni (2015) and Howe (2020) who demonstrated that students prefer electronic assessments. This may be since they may have much more control of the given assessments (Ridgway et al., 2004). Over seventy percent respondents admitted that useful and sufficient instructions were given for their assessments (75.5%, 108). This could be due to the attentive lecturers who disseminated announcements and reminders for online assessments on WhatsApp group chats, e-mails and other LMS platforms to ensure their students are not falling behind with updates regarding the assessments. Also, many respondents (71.3%, 102) were satisfied with their performance and results. This can be proven by the increasing pattern of students on the dean's list (internal data) since universities started conducting the online assessments. To the lesser extent, more than sixty percent of respondents acknowledged that online assessment enhanced their learning quality (65.0%, 93), reduced stress related to examination (64.3%, 92) and easier than the traditional or F2F assessments (63.6%, 91). Online assessments provide students with feedback which helps to improve their learning (Osuji, 2012; Gilbert et al., 2011; Ridgway et al., 2004). Our data showed around half of respondents (54.5%, 78) believed that a convenient way to measure their learning is by having online assessments. There is also potential for improved academic performance and reduced examination stress due to efficient time management, better sleep patterns and reduced anxiety (Khalil et al., 2020) when online assessments are done in their comfort zones.

Consequently, less than sixty percent of respondents indicated that they received immediate feedback about their performance (58.7%, 84), encouraged them to learn the subject (57.3%, 82) as well as appropriate and comprehensive (55.9%, 80). Gilbert et al. (2011) revealed that many respondents agreed that poor performance in an assessment motivates them to work harder for the next test although good performance did not reduce their motivation to work hard. Besides, online assessment has made it possible to immediately help students to get direct and instant feedback about their performances (Gilbert et al., 2011). This type of assessment improves educators' feedback (Ridgway et al., 2004; Osuji, 2012) and enables them to track the performance of their students (Nicol, 2007). Nevertheless, more than half of the respondents (44.1%, 63) stated that the traditional or F2F method is better than assessments conducted online whilst less than forty percent of respondents (39.2%, 56) thought that online assessments are appropriate for all students. This showed there are still many students who preferred the traditional method for some reasons. One possible reason is poor internet connectivity that deterred them from finishing their assessments in timely manner. Lastly, less than thirty percent (29.4%, 42) believed online assessment is suitable or applicable for all courses or subjects. In reality, not all subjects or courses could be conducted through online assessments especially those involving hand-on or laboratory-based subjects.

Further statistical analysis performed using t-test revealed that there was no significant difference between gender and perceptions of online assessment (results not shown). Likewise, one-way ANOVA test showed that there was no statistically significant difference between the current semester of study and perceptions on online assessment (results not shown).

Table 2: Perceptions of Online Assessments

Statements*	N (%)	
	Yes	No
Online assessments are conducted in variety of ways	132 (92.3%)	11 (7.7%)
Online assessments are conducted using multiple platforms	131 (91.6%)	12 (8.4%)
Online assessment enhances self-learning	128 (89.5%)	15 (10.5%)
Online assessment is prone/vulnerable to cheating	124 (86.7%)	19 (13.3%)
Online assessment is convenient and flexible	123 (86.0%)	20 (14.0%)
Online assessment is faster than the traditional paper assessment	112 (78.3%)	31 (21.7%)
Announcements/instructions given for online assessments are useful and sufficient	108 (75.5%)	35 (24.5%)
I prefer online tests, quizzes, exams, presentation and other online assessment tools	107 (74.8%)	36 (25.2%)
Online assessment improves my technical skills	103 (72.0%)	40 (28.0%)
Online assessment provides unbiased evaluation [it is fair]	103 (72.0%)	40 (28.0%)
I am satisfied with my performance and results of online assessment	102 (71.3%)	41 (28.7%)
Online assessment enhances my learning quality	93 (65.0%)	50 (35.0%)
Online assessment reduces the exam stress	92 (64.3%)	51 (35.7%)
I prefer online assessment than the traditional/face-to-face assessment	92 (64.3%)	51 (35.7%)

Online assessment is easier than the traditional/face-to-face assessment	91 (63.6%)	52 (36.4%)
Online assessment provides immediate feedback about my performance	84 (58.7%)	59 (41.3%)
Online assessment motivates me to learn the subject matter	82 (57.3%)	61 (42.7%)
Online assessment/test/exam questions are appropriate and comprehensive	80 (55.9%)	63 (44.1%)
I believed online assessment/test/exam is a convenient way to assess my learning	78 (54.5%)	65 (45.5%)
Online assessment is better than the traditional/face-to-face assessment	63 (44.1%)	80 (55.9%)
Online assessment is suitable for all students	56 (39.2%)	87 (60.8%)
Online assessment is suitable/applicable for all courses/subjects	42 (29.4%)	101 (70.6%)

Notes: *Arranged according to statement with highest response of 'Yes'

Challenges of Online Assessments

This segment consists of 13 statements and our findings revealed many challenges encountered by the respondents regarding their online assessments (Table 3). The highest number of respondents (86%, 123) stated distractions at home or from others as the major challenge. Ariyananda et al. (2022) revealed watching television, sleeping, house chores and distractions from other family members were among the factors. Moreover, some students might have to share devices (Sud et al., 2020) and internet access (Roskvist et al., 2020) with other family members. Next, three quarter (75.5%, 108) of respondents stated that lack of motivation. Findings from Khalil et al. (2020) showed that students lost their motivation to study due to online learning transition and cancellation of examinations. Additionally, students might experience digital fatigue (Tan et al., 2022) that caused exhaustion, poor concentration and loss of engagement due to long hours spending on the digital devices (Shahrivini et al., 2021; Singh et al., 2020). Ariyananda et al. (2022) acknowledged monotony in studying, lack of support from peers and educators and limited e-learning resources as disturbing and demotivating factors.

Likewise, 94 (65.7%) respondents admitted difficulties to hold online discussions among group members for completion of assignment. Some students might find it hard to reach their groupmates or classmates since they were not on the same campus or college. This might affect the progress of their assignments negatively and might ended up completing the assignments beyond the deadlines. In addition, 90 (62.9%) respondents pointed out lack of access of resources or library as a challenge. Students had limited access to resources since they have been deprived from accessing the physical library due to the pandemic and only depend on online materials. Next, 110 (76.9%) respondents stated that they faced difficulties answering questions within the allocated time whilst 104 (72.7%) and 92 (64.3%) respondents admitted that they did not have enough time to check all their responses and were unable to think fast when answering questions during online assessments, respectively. Thus, our findings showed that more than half of the students encountered such problems during the online assessments. Apart from students' poor time management, internet speed and connectivity might also contribute to this array of challenges especially when the process of downloading and uploading of documents need to be made during online assessment period.

More than half of the respondents stated lack of space or proper facilities (65%, 93) and limited access to internet (67.8%, 97) as the challenges. During the pandemic, most of the students were not presents at their campus and transited to having online classes. Thus, the lack of proper facilities such as study rooms or library might have affected their performance during online assessments. Ariyananda et al. (2022) reported that one fourth of their respondents did not have personal study rooms whilst lighting, temperature and noise adversely impacted university students' academic performance significantly (Realyvasquez-Vargas et al., 2020). Since the students resided in various geographical locations, those from rural areas might encounter slower internet connections compared to those from urban areas due to limited internet accessibility and connectivity (Digital Nasional, December 2021; Roskvist et al., 2020). While students must perform their assessments online, they have to use the dedicated platform such as UFUTURE (Othman et al., 2022), Google Classroom, Microsoft Teams or other centralised platforms that allow online assessment to be conducted and tracking of students' progress (Singh et al., 2020). These platforms need good internet connectivity and use sizeable amount of internet data. Shortage of internet access due to costly internet data may also be caused by economic challenges or disparities faced by the students (62.9%, 90). A study conducted by Lynch (2017) found that difficulty with internet access among students was caused by the families' low income or poverty.

Moreover, 97 (67.8%) respondents reported of feeling either stress, nervous, anxious or fear when taking online assessments. These feelings might be common for students who are taking assessments or exams but developing test anxiety could negatively impact their performance (Huberty, 2009). Many other possibilities could cause these feelings of uneasiness including fear with internet connectivity interruptions while taking the assessment that could jeopardise their attempts to complete the assessment within a stipulated time. Three quarter of respondents (75.5%, 108) indicated lack of motivation as a challenge of online assessment. This was true when they were away from their friends, unable to form study groups physically and no competition from their colleagues as previous F2F sessions.

Finally, 73 (51.0%) of respondents indicated lack of internet or online technological knowledge/skills when completing online assessment as their challenge. As the students are currently living in a world where technology is a daily need, some may find none to zero difficulties with online technology while some might be struggling because they have to adapt to a new norm, using new platforms and ways to do their online assessments. This could be true especially to those who may be inexperienced in handling the online assessment techniques (Osuji, 2012). Ben Youssef et al. (2022) found that students with low digital skills performed poorly compared to those with good digital skills. On the other hand, it may be possible for some first-time educators to encounter problems when they were forced to conduct online assessment especially without sufficient knowledge and training. Some instructors may be inexperience or unfamiliar with the technology themselves (Jordan and Mitchell, 2009).

Additionally, further statistical analysis made using t-test revealed that there was no significant difference between gender and challenges encountered during online assessment (results not shown). Moreover, one-way ANOVA test showed that there was no statistically significant difference between the current semester of study and the challenges faced during online assessment (results not shown).

Table 3: Challenges of Online Assessment

Statements*	N (%)	
	Yes	No
Distractions at home/from others	123 (86.0%)	20 (14.0%)
Difficulties in answering questions within time limit during online assessment	110 (76.9%)	33 (23.1%)
Lack of motivation	108 (75.5%)	35 (24.5%)
Do not have enough time to check all my answers during online assessment	104 (72.7%)	39 (27.3%)
Lack/limited internet access	97 (67.8%)	46 (32.2%)
Feeling stress/nervous/anxious/fear when taking online assessments	97 (67.8%)	46 (32.2%)
Difficulties to hold online discussions among group members for completion of assignment	94 (65.7%)	49 (34.3%)
Lack of space or proper facilities	93 (65.0%)	50 (35.0%)
Unable to think fast when answering questions during online assessments	92 (64.3%)	51 (35.7%)
Economic challenges [incompatible device or gadget, internet charge etc.]	90 (62.9%)	53 (37.1%)
Lack of access to resources/library	90 (62.9%)	53 (37.10%)
Lack of feedback from lecturers on online assessment performance	87 (60.8%)	56 (39.2%)
Lack of internet/online technological knowledge/skills when completing online assessment	73 (51.0%)	70 (49.0%)

Notes: *Arranged according to statement with highest response of 'Yes'

Students' Suggestions to Improve Online Assessment Implementation

The most common suggestion by the respondents were regarding the time allocation for the online assessment. Many students agreed that the time allocated for to answer the online assessment is not enough as they find themselves taking a long time to recheck and upload their answers. Next, the respondents suggested that the platforms used to conduct the online assessment must be able to run smoothly and preferably those that require low internet data consumption. The respondents also recommended that the methods or platforms used must be user friendly and easy to access such as using the Google Form. Likewise, some of the respondents would like to receive feedback from the lecturers regarding their online assessment, so they get to know their level of understanding of the subject. Moreover, the respondents had high hopes that measures to block any forms of cheating during the online assessment to be strictly implemented in order to protect the integrity of the online assessment. Lastly, the students also encouraged the lecturers to use a simple, attractive and fun platforms and learning materials such as Kahoot and prepare more alternative references such as e-books.

Conclusion

The COVID-19 pandemic, although a global crisis, has presented new opportunities for educational exploration. With the rise of technology, online learning has become a crucial aspect of teaching and learning. The use of formative and summative assessments online has

been viewed as a solution during the pandemic, leading to calls for its continued use post-pandemic as a major teaching method.

With regards to the implementation of online assessments, positive responses were recorded from both students and educators. However, there are drawbacks and hiccups that need to be investigated and find the possible best remedies to encounter such problems. Likewise, the educators need to upskill and equip themselves with the emerging technologies, engage new teaching resources and techniques as well as exploring and developing alternative assessment methods. Based on the findings, our study has successfully achieved its objectives of exploring the students' perceptions and challenges regarding forced transition into online assessment.

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