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Article

The Validity and Reliability of Online Examinations in the State Universities of Sri Lanka: An Empirical Study

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Abstract

The aim of the current study is to examine the validity and reliability of online examinations through undergraduates' and lecturers' perceptions and identify the ways in which online examinations can be more focused and effective. To this end, a questionnaire including both qualitative and quantitative inquiries were administered among forty-five undergraduates and fifteen lecturers of three state universities in Sri Lanka. Thematic Analysis and SPSS software were used to analyze qualitative and quantitative data respectively. Findings of the study indicate that 80% of the undergraduates and lecturers preferred traditional examinations to online assessments given its flexibility, validity, and fairness. Majority of the lecturers encountered issues during online examinations, thus they reported the need of improving the methods and strategies of online assessments in a way they measure undergraduates' performance accurately. Moreover, undergraduates' social, economic, technological, and psychological issues also hindered the effectiveness of online examination to a considerable extent. The results of online examinations cannot be regarded as valid and reliable because they were unable to evaluate undergraduates' learning outcomes as accurately as onsite examinations. The study has implications for the undergraduates, test administrators, lecturers, and the university management.

INTRODUCTION

In this globalized society of 21st century, technology has invaded almost all the sectors in the world including economy, health, transportation, and education and has facilitated people with modern innovations. In this era of digitalization, the knowledge of digital skills is increasingly important as they are crucial for the accommodation of technological demands. In particular, most children in the present society are "digital-age learners" thus, they are highly skilled in using technological devices (Collier, Burkholder, & Branum, 2013). This means that their skills and knowledge in this area of technology can be positively applied in the field of education, especially they can be trained to apply their digital literacy for academic purposes, and it might be viewed as a new transformation for the conventional learning and teaching paradigm. In addition, the Covid-19 pandemic has also resulted in a significant transformation in the traditional methods of teaching and learning that ultimately converted physical learning environments into virtual learning platforms.

Currently, Sri Lanka is also attempting to enhance the effectiveness of technology-based learning and online examinations. Conversely, online education or e-learning is

relatively a new concept in the Sri Lanka educational sector. This is mainly because, most primary, secondary, and tertiary education institutions in Sri Lanka have been following traditional methods of teaching and assessments for years. Despite, this practice, students are expected to perform well in the online examinations and the assessments that are conducted via the platforms like Zoom, Microsoft Teams, and Moodle. The process of conducting online examinations and assessments has become problematic as it differs from the familiar evaluation methods. Moreover, to which extent students' achievements (Intended Learning Outcomes, ILOs) can be measured through online examinations has become a vital issue and a challenge. Therefore, the overarching aim of this study is to reveal the validity and reliability of online examinations through the perceptions of undergraduates and test administrators and make recommendations to overcome the challenges of online assessments. In Sri Lankan context, research relating to online examinations was almost unseen. Although many research had been conducted on online education in Sri Lankan context, adequate number of studies have not yet examined the impact of online examination on undergraduates' performance.

Education usually takes place in physical learning spaces around the world, in the presence of both teachers and pupils in classroom. However, the use of the internet for various educational purposes has recently been increasingly visible. The internet largely contributed to make productive changes in the field of education thus it could provide diverse learning opportunities for students.

In the era of digitalization, the terms distance education and online education are used interchangeably in field of education. Even though, the two terms seem relatively similar, they have different characteristics. As researchers claim, distance and online education do not require students' physical presence for learning and teaching (Bartley & Golek, 2004) this means that learners and knowledge providers are physically separated (Hodges, Moore, Lockee, Trust, & Bond, 2020), thus the communication between teachers and students takes place through a technological device. This separation can be viewed in terms of physical separation, geographical separation, and distance in time, pedagogical distance, and socio-cultural distance.

For McIsaac and Gunawardena, distance education is "no more than a hodgepodge of ideas and practices taken from traditional classroom settings and imposed on learners who just happen to be separated physically from an instructor" (Gunawardena & McIsaac, 2004). Anderson and Simpson (Anderson & Simpson, 2012), and Holmberg identified distance as a social activity in which learners are self-directed and learning occurs in the context of a supporting organization. Holmberg regards the "non-contiguous" communication as the dominant form of communication in distance education although there are other forms of communication that characterizes distance education (Holmberg, 1994). As Peters. underscores distance education offers a shift from an elitist model of education to mass higher education, and most importantly, distance education has minimized the informal opportunities of learning that are common in some social settings (Osborne & Plastrik, 1997).

In online education, on the other hand, students need the access to a Virtual Leaning Environment (VLE) to attend live online sessions. While policy makers and curriculum designers are now working to optimize the benefits of online education, educators and practitioners are also increasingly employing online learning methods in higher education to achieve better learning outcomes (Pape, 2010). In this competitive era, every university is seeking for high-quality, low-cost teaching and evaluation methods, and many educators and academics believe that online education can help reduce the increasing costs of postsecondary education.

Although online and distance education have gained a worldwide recognition with its significant impact on education in the 21st century, in order to gain meaningful outcomes from these methods, learners need advanced knowledge of online tools and applications. Although in a traditional face-to-face classroom setting, teachers function as facilitators of the students in a distanced learning environment learners become more responsible and function as independent leaners in the learning process. Currently, most Sri Lankan state universities are conducting their teaching, learning and examinations via online platforms. Therefore, it is important to identify to which extent this novel mode of examinations can measure students' course learning outcomes.

Given the influence of the internet and the World Wide Web, world's Education has drastically changed (Abeywickrama & Hewa, 2019). Online education has shown promise in meeting the needs of all students, especially those who are deemed to be socially disadvantaged. In other words, online education is considered an independent form of learning which can reach every part of the society (Gunawardena & McIsaac, 2004). As learning has become easier with the support of these advanced technological facilities many researchers tend to investigate their impact on education.

Many studies were attempting to identify the differences in student performance between traditional and online instruction. Neuhauser, used a management undergraduate course to investigate the differences in learning outcomes between the two methods of teaching principles: asynchronously online teaching and the traditional face-to-face teaching (Neuhauser, 2002). The study revealed that the teaching methods and learning preference had no significant impact on the final grades of the students. Similarly, Ni conducted a study in a Public Administration class at the California State University to identify the difference between student performance in online and traditional classrooms (Ni, 2018). The study recognized that the student performance as measured by grade is independent despite the mode of instruction. However, the number of failed students in online class is higher than the failed students in traditional class (Ni, 2018). On the contrary, findings of the study undertaken by Navarro and Shoemaker, illustrated that the online learners' outcomes are better than the learners in a traditional learning background (Navarro & Shoemaker, 2000). The study also found that the students are strongly satisfied with online learning methods. Similarly, as far as the learning outcomes of the two formats are concerned, Harmon et al., found that test scores of the online students are 0.4 higher than the scores obtained by the students in the traditional format (Harmon & Lambrinos, 2006).

Furthermore, the study conducted by Rovai and Jordan, investigated the importance of these two forms of learning for fostering a sense of community and collaboration among students (Rovai & Jordan, 2004). The findings suggested that the students in the blended format developed a stronger sense of community than the students in the traditional format. Besides, according to a research carried out by Miller, in the context of a Bachelor's degree, students reported positive perceptions with regard to the computer - aid assessment system and its feasibility (Miller, 2009). Conversely, respondents' comments also emphasize the need of a thorough awareness of the computer aided assessment system for demonstrating more effective learner outcomes. Due to the Covid-19 pandemic, education system in Sri Lankan also introduced online teaching and examination to the higher education sector. Therefore, it is critical to examine the ability of online examinations for assessing the learning outcomes of university students' courses.

The terms "evaluation" and "assessment" are frequently used interchangeably. Assessment and evaluation, on the other hand, are two concepts with distinct characteristics. Many research have been conducted in order to specify the difference between assessment and

evaluation (Brown, 1990). The purpose of an evaluation is to measure the quality of a work or a student's performance against a standard whereas assessment refers to a set of measurements used to identify and interpret students' learning outcomes (Weir, 2005).

As Boud & Falchikov, claim, assessment is "a value-laden activity surrounded by debates about academic standards, preparing students for employment, measuring quality and providing incentives" (Boud & Falchikov, 2006). For Kealey, assessment and evaluation are traditionally used as a way to provide feedback to teachers and students, however, these two processes of assessing and evaluating are carried out in isolation (Kealey & Haines, 2002). Although there is no clear distinction between the two concepts in the literature the term "assessment" is used to indicate the process of measuring students' performance whereas the term "evaluation" indicates the process of measuring instructors' teaching procedure (Kealey & Haines, 2002). In this respect, assessment and evaluation are the means through which the process (formative) and the product (summative) is measured. In other words, the assessment is a process-oriented approach while the evaluation is product-oriented thus, the distinctions of two forms, "assessment" and "evaluation" lies in its orientation (Kealey & Haines, 2002).

As Kelter, conceptualizes, evaluation is the process of collecting data to specify the effectiveness of a program on the other hand, assessment is the process of collecting data to identify the methods to improve a program (Kelter, 2018). This means that evaluation is used to determine the current value of a program while assessment is used to determine the future improvements that are necessary for a program. Moreover, Kelter coined the term "assessment" to indicate the process by which the administrator of a program identifies whether they have achieved the expected goals and objectives, and the way they can make changes to the program for better achievements in the future. In this context, measuring learning is described as measuring the individual understanding as it is crucial for the learners and to make improvements in the methods of instruction. Scriven, created a definition of evaluation integrating numerous definitions for the term "evaluation" that are used in many dictionaries and the scholarly articles. He defined evaluation as the outcome of the process of defining the importance or significance (Scriven & Paul, 1987). However, due to the limited scope of the study, it did not broadly examine the other aspects of evaluation.

In general, many studies mainly focused on two aspects when defining evaluation and assessment: learner performance (assessment) and the instruction process or the learning environment (evaluation). As indicated, evaluation usually examines a program or a course that is conducted by an organization, and it consists of activities that are used to form judgements and opinions on the program's quality. In contrast, assessment usually measures students' attainment and learner outcomes.

Sri Lankan higher education institutions recently gave prominence to both online examinations and assessments. Therefore, it is important to identify the ways through which teachers can measure learner performance in an online setting and learn whether this mode of assessment could cater for learner needs and facilitate to measure learner outcomes accurately.

METHOD

The need for research methodologies to be embedded in paradigms and scholarly communities is widely recognized (Cohen, Manion, & Morrison, 2018). Paradigms are often featured by the methodological approaches, data collection and analyzing methods. Johnson and Christensen identified a paradigm as an approach that is used to conduct an investigation (Johnson & Christensen, 2014). Researchers have identified three major paradigms in educational research: qualitative, quantitative and mixed (Gorard, 2001). The current study used mixed method as it the most appropriate approach for this nature of research.

According to Bryman, quantitative research primarily highlights numbers and figures in the process of collecting and analyzing data (Bryman, 2001). It is significant that quantitative approach is scientific in nature thus, the findings can be generalized to a considerable extent. In other words, as Gorard, claims, when a researcher uses statistical data for analysis and interpretation, the results become valid and reliable (Gorard, 2001). Qualitative research, on the other hand, consists of participants' perspectives and attitudes (Berg & Lune, 2016) that support researcher to create meaning of respondents' real context and thereby understanding phenomena more holistically (Zadrozny, McClure, Lee, & Jo, 2016). This means that instrument that aid in problem-solving are used in qualitative research. Furthermore, the creation of the qualitative approach theory is dependent on evidence, hence the originality and independent nature of the qualitative approach is significant (Brown, 2003).

A research context must consist of the units that are associated with the research (Webster & Watson, 2002). In particular, according to Gorman and Clayton, qualitative research should be conducted in a specific context that aids in undertaking the research and interpretation of the responses of the selected sample (Gorman & Clayton, 2005). Per se, the current study focuses on the perceptions of the students and lecturers in three selected state universities in Sri Lanka.

Sabaragamuwa University of Sri Lanka located 162 km away from Colombo, belongs to the Rathnapura District in Sabaragamuwa Province where there are around 14000 undergraduates. The university consists of eight faculties which offer multiple courses for the students. University of Peradeniya is a leading university in Sri Lanka which is located 110 km from Colombo, and it is in the Central province. The university hosts nine faculties, three post graduate institutes, 10 centers, and 73 departments. The University of Ruhuna is situated in the Southern province in Sri Lanka and the university hosts ten faculties. Currently, it is categorized as a Public Research University.

The total participants of the study were 60, 45 Arts undergraduates and 15 lecturers, and they were randomly selected representing the three universities. As Sadish et al claim, generalizations can be made about the population as a whole from a sample of units chosen at random. This concern led the researcher to apply random sampling method in selecting participants for the study. More specifically, it allowed the researcher to gather unbiased data, and thereby arriving valid conclusions and recommendations (Ahmaidi et al., 1998).

For data gathering, this study employed two research instruments: questionnaires and semi-structured interviews. According to Holroyd and Harlem, questionnaire provides participants with a considerable time to answer the questions that can be collected later (Holroyd & Harlen, 1996). The present study employed a questionnaire for collecting information required to meet the primary and specific objectives of the study. The questionnaires were administered among the university students who represented a significant percentage of the research population. As McNamara argues, interviews are often helpful if it takes after a questionnaire as it allows the researcher to uncover participants' real experiences and perspectives. Accordingly, semi-structured interviews were undertaken with the selected group of lecturers in the three universities.

It is important to identify an appropriate method for analyzing data as it functions as a key aspect in every research. As claimed by Gogoi, Statistical Package for Social Sciences (SPSS) is a useful software program mostly for the Social Science researchers to analyze their complicated research findings (Gogoi, 2020). Given this orientation, SPSS was used as a quantitative data analyzing tool of the study. A growing number of researchers (Boyatzis, 1998), on the other hand, have identified Thematic Analysis (TA) as a potential tool for recognizing, analyzing and interpreting of qualitative data while reflecting on the validity of

them. Thus, the current study also used Braun and Clarke's, six steps of TA. The process included familiarizing with data, generating initial codes, categorizing data into themes, reviewing themes, specifying the themes with names, and finally producing the report. This study effectively interpreted the participants' responses of online examination in the current higher education system with the support of TA (Braun & Clarke, 2006).

RESULT AND DISCUSSION

The primary aim of the study is to examine the overall effectiveness of online examination for the students in the Sri Lankan universities. To this end, the findings that were generated through qualitative and quantitative data analysis are presented in this section. Moreover, the section presents the visual representation of the analyzed data through figures and tables while highlighting the participants' responses where necessary.

The reliability and stability of the internet connection is critical while conducting online examinations. As such, the study examined the students' satisfaction with the existing internet connection. As reported by the students, 56% of the majority was dissatisfied with the stability of the network connection whereas substantial number of students (44%) expressed their satisfaction over the existing connections. Findings demonstrate that considerable number of students have no stable access to the internet during online examinations.

The majority of the participants demonstrated the importance of physically conducted examinations through their comments. Their responses such as, "exams that are physically administered are fair to everyone." (Participant S2), "they are simple and more focused than online exams" (Participant S7) as such "onsite examinations are most successful method in Sri Lankan education system" (Participant S11), highlighted the students' preference for the physically conducted evaluation. As indicated by Bayley and Nancarrow, traditional onsite examinations are carried out in accordance with a standardized format and thus, they are very direct, speedy and norm-referenced (Bayley & Nancarrow, 1998). In addition, traditional assessments always evaluate students' lower level cognition skills which includes the capacity of memorization (Smaldino, Lowther, Mims, & Russell, 2021). One of the main reasons why students are reluctant to accept the new mode of examination was due to its complexity. As they are new to the online platform, they highlighted the importance of simplicity while reporting the success of physically conducted examinations.

In particular, participants emphasized how candidates are promoted for cheating and copying during the online examinations as in the case of Participant S14, "while undertaking an online exam we always rely on other sources whereas during offline exams it's just us and our knowledge." As Anusha et al, claim, students are highly likely to depend on their friends and browse the internet during examinations (Anusha, Soujanya, & Vasavi, 2012). Similarly, in the Sri Lankan university context with this new form of evaluation, students tend to disregard examination malpractices such as cheating, copying the content from other sources, and referring to the books or other materials. This means that online evaluations are increasingly becoming a threat to the integrity of examinations. Critically, these practices may reduce the creativity of students which may unfavorably impact on their future performance and employment opportunities.

On the other hand, it is also noted that examinations conducted through online platforms were preferred by a significant number of students, for instance, as participant S13 stated "exams taken online take less time and are more relevant to today's world". Similarly, online evaluation was recognized as a better choice by Participant S3, "online examination makes everything convenient except for a few technological difficulties" and, for, Participant S10, "online exams are beneficial since they are less stressful". Moreover, online tests can be

conducted at any location without the candidates'' physical presence, and examiners can monitor those utilizing online devices. This perspective was broadly reported by participants, for example, “if the candidate has access to an online testing system, he or she can take the exam from anywhere. With the aid of a web camera and microphone, exam monitoring can be carried out” (Participant, S20).

Table 1. Students’ perceptions of online examinations

Student perception	Always	Sometimes	Rarely	Never
Effective organization and management of online examinations	19%	59%	22%	0%
Allocated sufficient time for online examinations.	14%	59%	23%	4%
Hindering performance due to the lack of technological knowledge	59%	33%	4%	4%
Students’ cheating during online examinations	30%	59%	11%	0%
Need of strict rules and regulations for online examinations	44%	37%	11%	8%

Considerable number participants, on the other hand, reported the benefits of both online and onsite examinations. According to them, these two methods assess one’s capacity of memorizing and demonstrating facts by answering questions. This awareness was reflected in the comments of Participant S12 “both online and physical examinations are convenient for candidates. Despite the mode of examination, they should be able to perform well if they have gained the required knowledge and skills” Similarly, Participant S21 noted that,

Both methods have positives and negatives. Remembering and rewriting is what happens in both online and physical examinations. Both modes seek the capacity of memorizing. Anyway, examiners presume that online exams are comparatively easy. So, the proper time that the candidates need is not given. In general, as demonstrated by participants, physically conducted examinations are preferred by the students to online examinations.

Present participants’ perceptions in relation to the organization, time allocation, technical knowledge, rules and regulations, and malpractices that may occur during the online examinations. As illustrated in Table 1, 19% of the students reported that online examinations were well-organized while for, 81% of the participants they were unorganized and not effectively managed. Despite the fact that time allocation for the examination is considered a key factor 87% participants indicated that they could not demonstrate their knowledge and skills via online examinations due to lack of time. Conversely, 14% of the population was satisfied with the allocated time for the online evaluations. It is widely acknowledged that those with better technological knowledge can perform well in online evaluations. Consequently, the most students (92%) believe that their lack of technical expertise can hinder their performance, whereas only 8% never agreed with this perspective. Moreover, as per Table 1, the majority of the participants (59%) stated they can easily cheat during online examinations while 11% disagreed. As far as the rules and regulations are concerned, almost 81% participants viewed the need of the strict guidelines and principles for the online examinations.

This section presents the perceptions of students and teachers on the issues they face during online examinations. As reported, most students encountered connectivity and technical issues, power outages, and typing issues while undertaking the online examinations. Participants’ comments significantly reflected these perspectives, “Connection issues has

become a real challenge for me. It is really hard to stay connected when students have unstable internet connection. No doubt, it will also negatively affect our grades as well" (Participant S11), how can we face exam with constant power cuts and signal issues (Participant S3), Then we had to wait for hours to start again, and also, we are not good at typing the answers, we have never practiced this before" (Participant S3), on the other hand, we have no thorough awareness of technology and how to recover technical issues (Participant S25). Critically, lecturers also encountered similar challenges when conducting online examinations. As in the case of Participant L1, "signal issues, power failures, students' unsupported devices were really problematic". Similarly, "there were coverage issues and disturbing whether conditions. Sometimes it was impossible to reach certain students as they also had the same issues" (Participant L12). The response of Participant L13 further supported this perception, "students' lack of computer literacy, lack of interaction between the student and the teacher and bad weather were the real challenges"

As the University Grant Commission reports, outages of electricity, software/hardware issues, issues related to connectivity, inadequate ICT and English knowledge and other skills necessary for accessing the internet, internet assisted software, tools and applications were the key challenges that the Sri Lankan universities encounter when administering online examinations. Given this background, the University Grant Commission points to the need of modifying the assessment criteria so as to conduct diverse assessments for evaluating undergraduates' performance and skills rather than adhering to a summative examination. Particularly, the new evaluation process should treat the students equitably while ensuring the quality and standards of examinations and thereby validating the results obtained by the students. Furthermore, as reported previously, "the internet connectivity in Sri Lanka is unstable. "Pockets of areas which have no coverage from telecom providers exist". Therefore, mostly, students should find locations with proper internet connection.

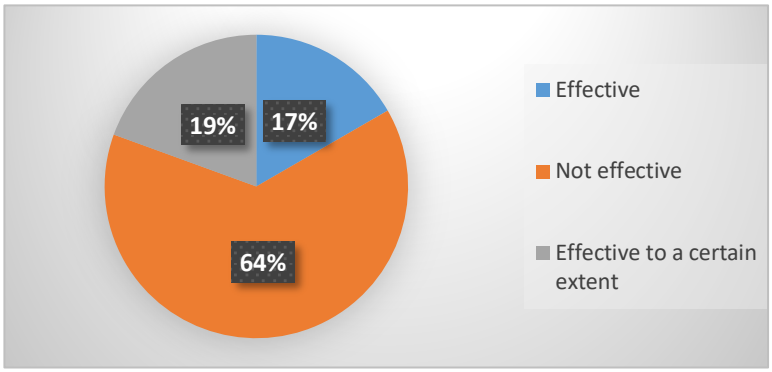
Apart from the technological issues and the challenges caused by external factors, a significant number of responses highlighted the psychological issues as well. For instance, stress and anxiety are negative consequences of online examinations. As indicated by Participant S26, "anxiety was a great challenge. When I was anxious, it becomes really difficult to focus on papers. Stress makes me weak and feeble. As they are psychological hurdles, I find online examinations really hard". This reflection demonstrates how students develop depression during the period of online examinations due to their unfamiliarity with the evaluation system, especially the lack of social interaction and collaboration with peers and teachers while studying online and during online examinations can also largely contribute to develop anxiety among students. Critically, these personal factors may negatively impact on students' performance during online assessments, as a result students' knowledge and skill may not be accurately measured (Adnan & Anwar, 2020).

Another critical issue raised by the students was insufficient time allocation for online submission of the answer script. Participants' comments, poor time allocation (Participant S24), inadequate time for submitting answers (Participant 28), difficult to submit due to the connection and technical problems (Participant S22), reflected this issue. Furthermore, examinations papers are not always structured in a practical and realistic way thus, students have no sufficient time to answer the questions. 82% of the students commented on the lack of time allocation for the papers conducted through online mode.

The University Grant Commission of Sri Lanka identifies impersonation and plagiarism as potential problems associated with online assessments; however, these issues can be addressed by constantly supervising candidates through webcams and mobile cameras conducting supervised online examination. The University Grant Commission has also

recommended technical strategies: "randomizing questions, shuffling questions and options order, limiting the number of attempts, limiting the time for tests and deferring automated feedback" to minimize these malpractices. Given this context, most test administrators hardly acknowledge the use of online platforms for evaluation (Unger et al., 2020).

Overall, it is clear that there are numerous concerns and challenges when conducting online examinations. As these issues have considerably hindered students' performance during online assessments, it is essential to improve the facilities required for online education in order to gain the maximum advantage of online evaluation.



Picture 1. Effectiveness of Online Examinations

As indicated, the highest number of responses (64%) were recorded for the ineffectiveness of online evaluation. This perspective was further validated by participants through their comments: "Sri Lankan online education system is not developed so; online examination is unsuccessful." (Participant, S11), "many things need to be changed and improved before conducting examinations online (Participant L3), supervised online exam are meaningful, but candidate requires a mobile phone and a laptop (Participant L4), with power cuts and technical issues it is impractical (Participant S15). On the contrary, as 19% of the participants reported, online examinations are effective to some extent as in the case of Participant S20 and S12, "I agree with this point to a considerable level. But each student should be provided with the needed devices and internet connections in order to enhance the effectiveness of the online exams" (Participant, 20), especially, "the committed and had working students should have the opportunity to show their knowledge and competence, if everybody tends to copy learner outcomes cannot be accurately evaluated, so, for me, the existing online evaluation is not that much meaningful" (Participant S12).

Overall, the findings of the study revealed that current approaches for evaluating undergraduate performance online are ineffective. This means that online examinations may not be as effective at assessing learner outcomes as traditional exams. Given this background, both students and test administrators suggest several mechanisms and proposals to improve the effectiveness and reliability of online examinations.

University management and test administrators suggest certain methods for enhancing the effectiveness of the online examinations. This outcome can be achieved, they reported, by giving applicants more time to answer questions, providing alternative assessments, enabling candidates to retake exams, and applying realistic regulations rather than inflexible guidelines. Participants reflections effectively demonstrate how these practices support candidates, for instance, following strict guidelines can hinder the student performance. It can make students more anxious and stressful. Therefore, candidates will benefit if teachers provide extra time for them in certain situations" (Participant L7). Furthermore, as the lecturers emphasized,

candidates' family background may hinder the quality and effectiveness of the online examinations. For instance, students may not turn on the cameras during online examinations due to inability to pay the internet bills and the family atmosphere. If this is really the case, examination paper designers should ensure that such issues may not negatively affect those students while undertaking the examination. In contrast, lecturers also stressed the importance of enforcing rigorous restrictions for students who routinely make excuses during examinations, for example, as Participant L11 reported, "some are genuine cases, but we had to be strict for certain students, especially those who always bring different excuses during online examinations" Another solution made by the lecturers for overcoming these issues is to improve the country's connecting facilities. As they reported, the government is responsible for ensuring appropriate internet coverage, which will allow students to complete their online assessments and examinations without interruption.

It is also recommended that prior to the commencement of online examinations, students must be properly trained and given the necessary instructions because many are not familiar with the online platforms. This perspective is strongly reflected via the comments of Participant L 10. "Assessing through online will be practical and meaningful if the students are provided with the skills required for using internet-assisted tools and applications". Besides, for online tests, most lecturers recommended a paper and pencil format, as well as group assessments, as these techniques might significantly reduce typing issues and improve evaluation efficacy. As Picciano, claims, it is necessary to increase the interaction and collaboration among candidates during online assessments to enhance the validity of the evaluations, as in an online classroom (Picciano, 2002). For example, "group assessments and presentations can increase student participation and performance. This practice will make students feel connected to the lecturer and their peers. So, I recommend group evaluation rather than individual assessments" (Participant, L3). It is also significant to note that according to the UGC circular, if a student refuses to adjust to the new method of evaluation, his or her examination be postponed to the following semester without incurring any academic penalties.

In general, as discussed previously, online examinations differ from the traditional examination in many ways. Notably, there is a considerable difference in performance between the online and physically conducted examinations. The students who have gained higher Grade Point Average (GPA) in physically conducted examinations tended to achieve low marks for the online examinations and online assessments. For this reason, most students have a negative perception of online tests. Although the examination paper formats, and the assessment procedures are systematic, inadequate time allocation and strict rules have become problematic for the students. This means that test administrators' lack of flexibility has unfavorably impacted on student performance. On the other hand, students' engagement in exam malpractices such as copying, and plagiarism are extremely common in online platforms. Numerous challenges like power failures, technological and connection issues were commonly identified. In addition, certain psychological issues: stress, anxiety, physical disruptions may possibly have negative impact on students' performance in online examinations.

CONCLUSION

Although the switch from traditional evaluation techniques to online assessments is necessary to keep up with worldwide trends and changes, it has had a negative impact on university students. According to the findings, online exams were unable to effectively assess unit learning outcomes in terms of undergraduates' knowledge, skills, attitudes, and mindset. In addition, given the chances for cheating during online exams, students' knowledge cannot be fairly assessed. Moreover, during online assessment, undergraduates and test administrators

have experienced numerous difficulties and issues, especially responding to individual needs has become a major concern of the test administrators at present. The study revealed that online tests in Sri Lankan public universities are effective to some extent, but with additional adjustments and upgrades, they might be developed as a feasible type of assessment. Conversely, university undergraduates' social, economic, physical, and psychological concerns may last for decades due to the newness of the online evaluation platform. The study emphasizes the importance of developing a robust online teaching and examination system that can accommodate any situation without disrupting the country's educational system.

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