

Online Examinations in the State Universities of Sri Lanka: Perceptions of Examiners and Students

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Abstract

Sri Lanka's educational system has negatively been impacted by the COVID-19 pandemic. Especially, drastic changes in the regular pattern of learning and evaluation have serious impacts on undergraduates and lecturers in Sri Lankan universities. The aim of this study is to explore the state university undergraduates' and the test administrators' perceptions of online examinations, thereby understanding the challenges and issues of online assessments. To this end, a qualitative investigation was undertaken with forty undergraduates of four government universities and seven lecturers of two universities in Sri Lanka. The study used questionnaires to gather data from the undergraduates and interviews with lecturers. Thematic analysis was used for data analysis. Ninety percent of the undergraduates and university lecturers reported that online evaluation has become ineffective due to their lack of expertise in the learning management systems and inadequate knowledge of using digitized internet-assisted platforms. Moreover, undergraduates' economical, technical and personal issues have also hindered the effectiveness of online evaluation. Since the online examinations could not evaluate undergraduates' learning outcomes accurately as onsite examinations, the results of online examinations cannot be considered valid and reliable. The current study has implications for the university undergraduates, test administrators, and university management.

Keywords: COVID 19 Pandemic, Effectiveness, Online evaluations, State universities, Undergraduates

INTRODUCTION

COVID-19 is a newly identified coronavirus that causes an infectious disease. The first patient infected by COVID-19 was reported on December 1, 2019, and the patient was admitted to the hospital on December 16, 2019 (Huang et al., 2020). COVID-19 is caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). The virus has spread to every continent except Antarctica since its discovery in 2019. From then onwards, the virus spread all over the world and as of 20 September 2021, 219M people were infected and 4.55M people were dead. COVID-19 has been classified as a pandemic by the World Health Organization, however, it is identified as a manageable epidemic.

The pandemic resulted in the destruction of social and economic stability in the world, including the world's most unexpected decline in the economy. Many educational institutions and public places were either partially or entirely closed, and many activities were canceled or postponed. Many sectors, including education, business, health, and information technology (IT) industries moved to online platforms during the Coronavirus Disease (COVID-19) pandemic. The emergence of coronavirus COVID-19 became a challenge for socializing across the world, and the learning and teaching system is no exception (Michael, 2020). As a result, all the schools, educational and higher educational institutes, and universities began offering online teaching and learning. Due to travel restrictions, social isolation, quarantines, campus closures, and border closures, the spread of

the coronavirus has had a significant impact on students in the higher education sector.

Sri Lanka is a developing country that provides its citizens with free education. The University Grants Commission (UGC) admits students to state universities based on their results in the GCE Advanced Level Examination; a national examination administered by the Ministry of Education. With the spread of the COVID-19 pandemic, Sri Lanka has faced issues in incorporating online learning into the university curriculum (Gunawardana, 2005). This is mainly because traditional classroom learning and teaching have been the practice of the universities for many years. Conversely, most universities could transform their academic and administrative activities online with the support of new and sophisticated software applications and technological devices. The adaption to online education instead of the traditional academic paradigm is considered a significant development in Sri Lanka's higher education sector (Rameez et al., 2020). However, this sudden transformation of conducting educational activities online has become a complicated issue and a challenge for teachers, students, and other staff members of the universities as they have no adequate knowledge and skills for using modern devices and technologies. Despite these issues, universities are increasingly attempting to align with the virtual teaching and learning model (Alipio, 2020; Hodges et al., 2020) as it is essential to continue the

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country's education without failure (Basilaia, 2020; Plancher et al., 2020).

Currently, Sri Lanka universities utilize the Learning Management System (LMS), Virtual Learning Environment (VLE), and the Lanka Education and Research Network (LEARN) to facilitate teaching and learning in their respective universities. Although only the lectures were conducted online through the Zoom Application at the initial stage, given the spread of COVID-19 virus, the universities were forced to conduct even the examinations online (Rameez et al., 2020). However, conducting online examinations in a manner that accurately assess students' course learning outcomes has become a critical issue at present for many reasons. As such, online evaluation has developed unfavorable attitudes among undergraduates and lecturers in state universities in Sri Lanka. On the other hand, as researchers argue (Haththotuwa & Rupasinghe, 2021), a country requires increased economic growth and infrastructure development for continuing online teaching and assessments. In this context, it is important to examine how state university undergraduates and test administrators view online examinations and understand the difficulties and problems with online assessments.

LITERATURE REVIEW

Impact of Covid-19 Pandemic on Education

COVID-19 is transmitted mostly by unknowingly inhaling and by close personal connections with the droplets in the air (Hamzah et al., 2020). When considering the overall infections as well as deaths, COVID-19 already has overtaken other infectious diseases such as SARS and MERS (Murphy, 2020; Zu et al., 2020). However, apart from supportive care, no particular therapy for COVID-19 has been identified (Yan et al., 2020; Hamzah et al., 2020; Yang et al., 2020). In Hubei, China, only CT scan data are considered significant evidence for COVID-19 clinical diagnosis (Zu et al., 2020). The outbreak of COVID-19 virus recently necessitated the closing of educational institutions in 192 nations in the whole world, and around 91.4 percent of all enrolled pupils were forced to leave the schools for a few days until the issues were sorted out (UNESCO, 2020). In Sri Lanka, the conventional educational system was the practice of schools and universities. Given this background, adhering to online teaching/learning and examination has now become a challenge for many educational institutions in Sri Lanka.

Physical and Online Education

Physical education is considered the most dynamic and interactive way of learning and teaching. In a face-to-face learning situation, teachers can divide learners into pairs and different groups, and monitor everyone concurrently (Stanton, 2021). This context allows teachers to understand their students better and assess their strengths and weaknesses. In particular, students in higher education can productively use the discussions in a physical classroom to reach competencies and demonstrate them in tests. As Razeeth et al., (2019), claim in a conventional classroom, undergraduates can directly "share their perspectives and clear up their own inquiries with the educator, in this way getting their inquiries addressed immediately" (p. 217).

Classroom learning and teaching were forcefully disturbed as a result of the spread of the COVID-19 virus and every higher education institution was advised to continue their educational activities through the virtual platform. As such, E-Learning came into practice as the most commonly used

teaching and learning method. E-learning, defined as an instructional process that makes a range of resources available to online learners, has evolved in tandem with significant improvements in information technology (IT) during the last two years.

Currently, online education has been broadly applied in education as well as in higher education (Islam, 2016). Many schools and institutions in the world started to offer some of their courses online even before the COVID-19 outbreak. It is important to note that online education is increasingly popularizing in the world "due to the influence of new technologies, global adoption of the internet, and intensifying demand for a workforce trained periodically for the ever-evolving digital economy" (Palvia et al., 2018, p. 233). In comparison to traditional education, e-learning requires fewer resources, is accessible to a vast number of students due to their expansion, and is simple to execute due to the widespread availability of technology. As a result, e-learning is increasingly becoming the key viable choice for continuing education during the COVID-19 epidemic. Along with E-learning, M-Learning evolved.

Mobile Education

The spread of the covid-19 virus enabled educational institutions to expand their reach and provide more educational opportunities to students. As indicated previously, through the advancements in technology, students received the necessary materials for learning through their computers and laptops. Mobile learning (M-Learning) is the next advancement of online learning where the learning materials are received via mobile devices by the students. As Luong et al. (2021) underscore, mobile learning is a type of learning that can be done anytime, anywhere in a handheld or palmtop device. The widespread availability and ownership of devices such as iPhones, iPads, and tablets have allowed users to access educational resources and activities which are related to their personal needs. "M-Learning in the open and distance learning landscape holds promise and provides exciting new opportunities" (Brown & Mbat, 2015, p. 115).

With the spread of the covid-19 virus, modes of delivery have moved gradually from Physical learning to E-Learning and then to M-Learning. All the institutions including the state universities in Sri Lanka are advancing ahead with the current trend to provide education in an extremely challenging phenomenon without any disruptions.

Distance Education

The term "distance education" refers to a method of learning in which the learner and the instructor are physically distanced. It uses a variety of technologies such as e-mail, audio, video, computers/laptops, and the internet (Roffe, 2004) as the means of delivering at least 80% of course content (Allen & Seaman, 2011; Shelton & Saltsman, 2005). In fact, over the years, distant education has been described in a variety of ways. According to Bri Stauffer (2020), the main distinction between online and distance learning is the geographical location. Students work from home and the teacher allocates work, and reports about the progress digitally after student submits them. In other words, students continue their studies with the support of an instructor while studying their lessons and doing exams through online.

Most importantly, distance learning is carried out in conjunction with other teaching methodologies as a hybrid learning method. The strategy used in teaching can be considered another distinctive difference between online education and distance education. Online learning is meant to

be utilized alongside a range of different in-person educational modalities. It is an extra method to liven things up in the classroom and provide the learners with a range of learning opportunities.

Testing and Evaluation

Testing has become the practice in the education systems for assessing students' performance. A test is defined as "any procedure for measuring ability, knowledge and performance" (Richards et al., 1985, p. 291), "in a given area" (Brown, 1994, p. 252). In education, testing refers to the process of measuring students' performance in order to appraise or determine their competencies by comparing their work with others or some other standard forms (Weir & Roberts, 1994). The performance is mostly evaluated through grades which play a key role in determining the process' efficiency and quality (Howard & Donaghue, 2015). Such an assessment can be presented in the form of a graded paper. Language tests usually evaluate learners' content knowledge and skills such as listening, speaking, reading and writing, and sub-skills such as comprehension, vocabulary, grammar, spelling and punctuations.

Although tests are commonly used in educational settings as a technique of assessment it is also a useful tool for the improvement of learning. Test has a significant impact on subsequent retention, hence increases the possibility of retrieval later. The recalling practice also increases the capacity of knowledge transfer to novel situations. Transfer can be described as the application of knowledge gained in one context to another (Roediger et al., 2011). Moreover, learners can better calibrate their overall knowledge on a specific lesson through testing. This means that students can understand the areas they need further improvement, thus they will learn more difficult aspects and prepare productively (Thomas & McDaniel, 2007; Kornell & Son, 2009).

Evaluation, on the other hand, is a systematic gathering, analysis, and interpretation of data regarding any facet of an educational program for the goal of making decisions. Evaluation can be utilized as a continuous management and learning tool to promote learning with five key components: a) outlining the aim of educational system, b) identifying and collecting relevant data, c) gathering significant and useful ideas of learners in their daily lives and careers, c) interpreting and analyzing students' data, and d) managing classroom or decision-making in the classroom (Kizlik, 2010). As Howard and Donaghue (2015) claim, gaining a broader understanding of measurement is the key aim of evaluation. This results in a change of attitude as well as the educational programmes' intended outcomes.

As indicated, testing and evaluation play a significant role in teaching and learning. Although online testing is currently undertaken for assessment of university undergraduates' performance and learning outcomes due to the covid-19 pandemic, to which extent such online examinations can accurately measure students' competencies is a question.

Student Online Assessments

As indicated previously, testing is an essential element of the educational process, and evaluation systems that are fragmented or disconnected from the teaching mode pose a major conceptual risk. When this occurs continuously, testing creates burden on the learning process as it does not measure what it aims (Rueda et al., 2021)

During the Covid 19 pandemic, educational establishments all around the world have turned to different forms of legitimate alternative assessments to examine if students have

met the course learning objectives. The practice of conducting online examinations has accelerated significantly due to the impossibility of administering face-to-face closed-book written tests (University Grants Commission, 2020). With the spread of Covid-19 virus, the University Grant Commission in Sri Lanka issued a circular for general guidelines for conducting alternative assessments in the universities and higher education institutions that recommends many alternative assessments to assess student achievements instead of written examinations such as "open-book examinations, take-home examinations, student portfolios, performance tests, examinations via zoom, online quizzes, timed-quizzes, online group and individual presentations, time-bound examinations, mini-projects, reflective journals, collaborative/cooperative team-based assessments, participatory co-creation, online viva and online presentations, e-portfolios, project-based assignments and presentations, design projects, and case studies" (University Grants Commission, 2020, p 1). The necessary guidelines were provided by the UGC to shift the traditional mode of testing and evaluation to other alternative methods. The Faculty Boards and the Senates of each state university and higher education institutes were given the authority to decide the method of evaluation for instance, "marks for continuous assessments shall be increased up to 60 % and final examination marks can be reduced to not less than 40% in the final exam" (p.2).

As indicated in the circular, modifications to the assessment criteria should be informed to the students beforehand in order to provide them with sufficient time to adapt to the new evaluation procedures. The new evaluation process should treat the students equitably while the quality and standards of assessment activities and results are maintained. Most importantly, if any student disagreed with the proposed alternative assessments, she/he can postpone that examination, and the particular individual can complete that unit in the following semester without any academic penalty.

METHODOLOGY

Context and Participants

In order to identify the effectiveness of online evaluation in the state universities in Sri Lanka, a qualitative investigation was undertaken with forty undergraduates and eight lecturers of four state universities in Sri Lanka. As Lichtman (2013) points out, a qualitative case study method may successfully achieve these goals because it can "bring understanding, interpretation, and meaning" (p. 17) to the whole phenomena of undergraduates in Sri Lankan state universities. Participants in the current study were English medium Science undergraduates who were offered English as a compulsory course unit. Participants belonged to the disciplines of Management, Applied Sciences, Geomatics and Science and Technology. The selected group which includes both males and females was between the age of 22 and 25.

As indicated in the literature, for a qualitative investigation, the researchers mostly utilized purposeful sampling methods and gathered data from a smaller number of participants. The key objective of intentionally choosing respondents is to make the researcher build a comprehensive study of "information-rich cases" (Patton, 2002, p. 46). Despite the small number of participants (Given, 2008; Hogan, Dolan, & Donnelly, 2009), the study thoroughly examines all instances to gain a complete knowledge of their perceptions (Savenye & Robinson, 2005). Thus, it indicates that the validity of the investigation is mostly influenced by the nature of the study

and the amount to which it investigates "complex in-depth phenomena" (Lichtman, 2013, p. 22).

Data Collection Instrument

A structured questionnaire was designed to collect data from the university students while the lecturers' perceptions were gathered through semi-structured interviews. The questionnaire was prepared using Google form and it was distributed through online platforms to gather data. The questionnaire contained 16 questions. All the questions required the participant's opinions and they were requested to provide ratings to a statement based on the given Likert-type scale.

The nature of qualitative interviews, especially flexibility and in-depth inquiries (Cohen & Manion, 1994) can help gain a new understanding of a difficult problem (Folkestad, 2008; Abeywickrama, 2019; Abeywickrama & Ariyaratne, 2020). As previous researchers claim, interviews can be undertaken in such a way it encourages the respondents to provide explanatory responses (Ashworth & Lucas, 2000; Cohen & Manion, 1994), thereby assisting the researchers to gain a more holistic understanding of the phenomena and resolving misunderstandings. Hence, this instrument "tends to be most favoured by educational researchers" (Hitchcock & Hughes, 1995, p. 157). Due to this background, semi-structured interviews were used as the tool for gathering data for the current study.

Data Analysis

Thematic Analysis (TA) is a type of statistical analysis that focuses on grouping and finding themes and trends. TA is clearly a powerful analytical method for qualitative research (Kiger & Varpio, 2020), which can provide scholars with a well-defined explanation while preserving the flexibility associated with its empirical perspective. It can create a wide variety of information to understand various issues from the point of view of the participants (Teng et al., 2012). TA "involves a constant moving back and forward between the entire data set, the coded extracts of data that you are analyzing, and the analysis of the data that you are producing." (Braun & Clarke, 2006, p.92). TA has largely been used in surveys and educational research (Coldwell & Maxwell, 2017; Abeywickrama, 2020a, 2020b). Given that, this study also utilized Braun and Clarke (2006) six phases of Thematic Analysis as its major source of information to recognize, assess and analyze the findings gathered. The following six phases were used in order to analyze the findings: a) familiarize with the findings by re-reading them, b) generate the initial codes, c) identify the themes based on the codes generated, d) evaluate the accuracy of the themes, e) outline a topic to make the themes noteworthy, and f) prepare the report while considering the meaningful contribution of the key themes (Braun & Clarke, 2006).

The researcher first became familiarized with the various perspectives of the interview transcriptions and then developed initial codes that describe the contents of the data. A code can be considered a short description of the response given by the participant and it is more of an explanatory statement than a clarification. In the third phase, the codes were used to develop topics based on opinions and significance. Later, the major themes were extracted and organized into developing themes. In this phase, the researcher referred to the entire collection of codes, as well as the extractions which are connected to them, and then organized them into broader themes. The topics uncovered in phase three were reviewed and improved in step four. The researcher examined all the grouped extracts to check if those

extracts are validated or matched with the themes. According to Braun and Clark (2006), the content within the themes must be logically connected. In the fifth phase, each theme discovered in the earlier stage was assigned a topic. During this process of refinement, the researcher was able to identify many ideas and the way they were linked to the primary research question (Abeywickrama, 2019). The concluded themes, as per, Braun and Clarke (2006), should be detailed and compelling.

FINDINGS AND DISCUSSION

The undergraduate in the selected group for the study have faced online examinations during the COVID-19 pandemic. The current study examined their perspectives of online examinations and the challenges they encountered with the sudden transformation of traditional examinations to online examinations. Among them, the majority of the undergraduates (51.6%) used the WIFI network while 48.3% of undergraduates faced their online examinations using the mobile network. 58.6% of the undergraduates used laptops and 41.3% of the undergraduates used their mobile phones to attend online lectures and online examinations. They attended online lectures through the Zoom platform and accessed the VLE for assessment submissions. All the lecturers who were taken in this study had assessed students online. 25% of them used mobile networks while 75% utilized both WIFI and dongles during the examinations.

Undergraduates' Integrity during Online Examinations

The term "cheating" is an act associated with academic dishonesty. According to Trost (2009), "academic dishonesty may include various behaviors like cheating on exams, buying papers written by others, over-referencing, plagiarism, lying about the content of papers, faking references, manipulation of staff to name only a few" (p. 369). As indicated in Figure 1, 92% of the undergraduates reported that there is a high possibility to cheat during an online examination whereas only 8% of the undergraduates stated that the possibility to cheat during an online examination is comparatively low. However, as 2% of the undergraduates claim, cheating may not occur during online examinations.

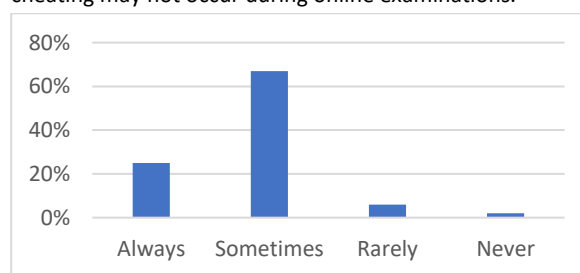


Figure 1: Undergraduates' Integrity

The lecturers have also validated these figures through their perceptions. The integrity of the undergraduates is doubtful due to "less supervision", and the possibility of cheating during online examinations has become a reason for the students to refrain from attending the lectures attentively (L 5). Similarly, the perspective of Lecturer 3 also supports this argument, "students always seek to escape from classes because it is easy to cheat during online tests". Furthermore, the lack of supervision encourages the undergraduates for alternative methods to cheat during online examinations. As Whitley (1998) argues, motivations for cheating are related to students' environmental pressure, increased need for succeeding and scoring, and economic and social benefits.

The findings of the study demonstrate that the key reason that drives students to copy and cheat during an online exam is the need to achieve good grades. "If there is an opportunity to cheat, they may do so because their only goal is obtaining high marks" (L 4). It is important to note that the undergraduates not only copy during the online examination but also help their colleagues to pass the examinations. The response of the undergraduate 10 supports this idea: "They exchange answers through the social media applications and support their friends. I have helped my friends to write exams" (U 10). Since students' achievements are determined through the marks and grades they obtain for the examinations, undergraduates are forced to cheat when they have opportunities to score high marks and grades.

As suggested by the lecturers, cheating during an online examination can be controlled to a certain extent only if the students keep their videos on during the examination. This perspective has been further supported by previous literature. "In terms of security, online proctored exams provide more protection against cheating than online exams without any supervision" (Prince et al., 2009, p.53). However, if this is really the case, measures need to be taken in order to minimize the academic dishonesty during online examinations, and thereby creating an environment where each undergraduate's performance is assessed accurately.

Challenges and Issues during Online Examinations

According to the results obtained through the questionnaires, 15% of the undergraduates stated that they are unfamiliar with the use of technological devices and the related software issues. 75% of the participants reported that they experienced hardware failures, uninformed power cuts and unstable internet connection during online evaluations. Undergraduates' perspectives such as "laptop and mobile phones get frozen unexpectedly making us helpless (U 7) and "inadequate time due to poor network connection" (U 8), reflected this issue. As the University Grant Commission (2020) reports, "depending on the hardware/software setup on the personal devices, some computers may have performance issues" (p.7).

Similar perception about the challenges experienced during an online evaluation was stated by undergraduate 6.

Sudden and uninformed power failures distract us completely when doing online exams. My WIFI takes a long time to provide a network after getting power back and the mobile data doesn't provide a strong network connection. So, I really felt difficult when undertaking one of my online exams. It was so hard with these issues.

The responses received from the lecturers also demonstrate that the undergraduates experienced several technical issues while facing online examinations. Although education in Sri Lanka is free, given the issues they encounter, the students are forced to spend money in order to continue their education without any hassles. Other than the power cut

and coverage issues, the students require hardware devices to access the exam materials and to meet the demands during online examinations as in the case of Lecturer 7, "a student must have various devices to complete an online examination; to access the paper, scan and upload the paper and a web camera for supervision". Furthermore, as reported by the lecturers, the unstable internet connection and power failures hinder the observation of students during supervised online examinations. This situation leads students to access the materials required for the questions. This perception was reflected in the comments of Lecturer 5, "as a result of the unstable internet connections, the test administrators are unable to supervise the undergraduates, no continuous streaming, so measuring students' performance accurately is doubtful". In addition, due to technical issues, the time limit provided for the submission seems to be insufficient. In particular, undergraduates experienced difficulties when they have time-restricted assessments and online presentations for their final examinations. As Khadka et al., (2020) claim, electricity, internet, and network problems are the key issues and challenges of online examinations. Despite all these, most faculties in government universities continued online learning and testing. This indicated the need, desire and perseverance among teachers to continue higher studies with the guidelines and video conferencing licenses supplied by their respective universities (Hayashi et al, 2020).

In general, as Sri Lanka is a developing country, the infrastructure facilities and the necessary knowledge and technical devices that are required for online education and examination are insufficient (Gamage et. al, 2020). Especially, those who have no laptops or PCs accessed Learning Management System on their smartphones which makes them disadvantaged. According to the University Grant Commission (2020), "internet (data) connectivity within the country is not uniform", and some areas have not been covered by the telecom providers (p. 7). Although students are forced to find open places to use the internet, maintaining continuous connectivity in such settings is difficult, thus conducting long-term testing has become impractical. Even though alternative methods such as allowing students to download examination papers and submit them upon completion, and giving students take-home assignments with a 24-hour submission, can solve this issue to a considerable extent, some students may use this opportunity for unprofessional conduct. Enforcing students to answer timed-restricted exams of 1-2 hours duration may negatively impact those who have no mobile phone or portable device. Software troubles, as well as computer malware-related issues, can also hinder students' examination process although they are uncommon. This context points to the need of implementing appropriate mechanisms for online examinations that could allow undergraduates to demonstrate their knowledge and skills with confidence and effectively.

Types of Online Examinations vs Preferred Online Examination

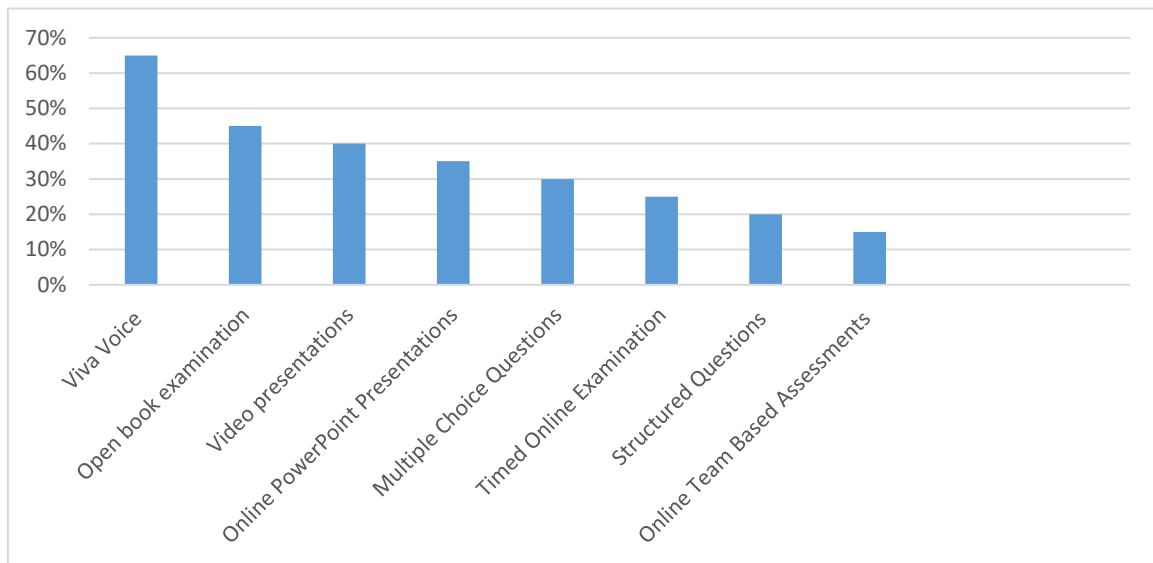


Figure 2: Types of Online Examinations

As indicated previously, the state universities can select the method of online examination based on the circular issued by the University Grant Commission. Figure 2 demonstrates

the alternative assessment methods employed by the universities for the assessment of their undergraduates' performance. As illustrated in the figure, the majority of the undergraduates (65 %) have faced Online Viva while the least percentage (15%) of undergraduates had Online Team-based Assessments.

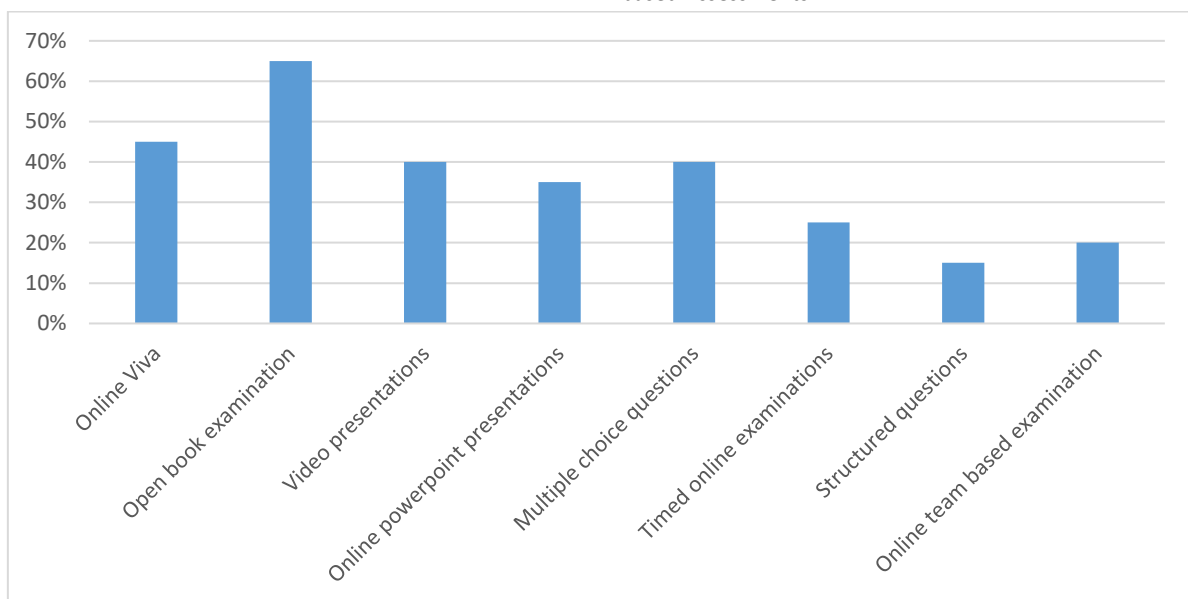


Figure 3: Preferred Online Examination

Critically, although, the majority of the undergraduates preferred Open Book Examination (see figure 3) 65% of them had to face Online Viva (see figure 2). Even though 15% of undergraduates had Online Team-based Assessments, 20% of students considered it their preferred method. These two figures clearly indicate the divergence between what undergraduates expected as the alternative method of assessments and what they gained. For most participants, Open Book Examinations are difficult to handle, conversely, they preferred Open Book Examinations more than other evaluation methods. It is important to note that 80% of undergraduates were satisfied with the organization and the schedule of the online examinations.

Impacts of Online Assessments

The study identified some benefits and detriments of the online examinations. Many undergraduates (75%) regarded

online examination as the best solution for the assessment of their knowledge and competence during the period of COVID-19 pandemic. Furthermore, as they reported, universities' compliance with online tests satisfies the present world's needs. The majority of undergraduates indicated satisfaction as they could finish the academic semester on time, without any delays caused by students, academic and non-academic strikes, or other physical problems. This view is broadly supported by the undergraduates, for instance, "we could finish our exams which were postponed due to this pandemic" (U 30), "this helped us understand the need of aligning with the current world requirements" (U 27) and "the syllabus was completed on time" (U 40).

Similarly, 75% of the lecturers stated that online examinations are beneficial for undergraduates as they have the opportunity to undertake the tests from home or any other

convenient location. This means that online examinations can reduce their exam stress to a considerable extent and provide adequate time for preparation. More specifically, as Lecturer 7 exposed, “undergraduates suffering from different psychological problems and illnesses, and those who have physical disabilities do not need to trouble themselves or worry about attending exams physically”. As far as the benefits of the online examinations are concerned, 25% of the lecturers stated that the paper marking has become convenient for them as in the case of Lecturer 1, “preparation and marking of MCQ papers and extensive oral examinations were easy and quick”. On the contrary, marking open book and structured answer scripts was more stressful and challenging for the lecturers owing to the health hazards they experienced and their inability to deviate from the previous practices of marking. Similar perspective was shared by Lecturer 6, “imagine a teacher who has 100 students which means 10-12 pages from each student. Can a teacher mark them fairly and accurately is a question?”

Critically, the findings of the study reveal that the stress level of the students can increase as a result of their poor psychological and financial status, and Covid-19 restrictions. 90% of the lecturers reported several reasons that may exacerbate undergraduates’ psychological status during online examinations, especially, when undergraduates’ content knowledge is assessed through take-home assessments, open book examinations and structured questions, many have opportunities for cheating, copying and surfing the internet, this may negatively impact on the students who used to perform well in the physical examinations. The undergraduates also strongly supported this perspective through their comments, for example, “bright students are disadvantaged because everyone scores better” (U 19), “not an effective way to evaluate the knowledge gained” (U 12), and “can cheat easily” (U 22), and validate their argument. In addition, a parent or associate being infected with COVID-19, economical issues and their impacts on everyday life, discontinuation of education due to locked down, and sensational news bulletins and misleading news reports, have all been recognized as important aspects that may increase students’ anxiety and psychological well-being. As Sundaresan (2020), underscores, undergraduates and students who undertake online tests are more prone to stress and anxiety compared to the general public. Many case studies have been published around the world on the psychological impact of COVID-19 on children as a result of disruptions in typical assessment processes.

As Hayashi et al. (2020) argue, undergraduates’ performance in assessments was considerably difficult to measure without a consistent, high-speed internet connection thus, they were psychologically disturbed and stressed. As indicated by the study, the health conditions of the undergraduates are at risk as a result of online learning and online examinations, specifically, continuous exposure to phone and laptop screens can affect the eyesight of the undergraduates. Furthermore, as reported by undergraduates, they suffer from overweight, back pain, and shoulder ache as a result of remaining in the same position for a prolonged duration of time. Moreover, the unfamiliarity and the lack of required tools and applications for the online examinations may also significantly contribute to students’ stress (Thomas et al., 2002).

Overall, although most universities in Sri Lanka recently switched to Emergency Remote Teaching (ERT) via online platforms in order to facilitate teaching and learning it has unfavorably affected students’ mental health. This points to

the need of administering online assessments without giving additional pressure on the undergraduates.

Effectiveness of Online Examinations

Although the majority (65%) of the undergraduates considered online examinations to be considered effective, 15% of them revealed that online examinations could not accurately assess students’ performance and skills. Especially, as there is no other alternative method to carry out physical examinations during the Covid-19 pandemic online flat forms can be regarded as the most effective means for evaluating students’ progress and performance. The participants supported this perspective through their comments: “how to continue the units of the next semester without completing examinations in this semester, they all are connected” (U 28), and “in this pandemic situation we haven't any options” (U 5). Conversely, this does not necessarily mean that online examinations are as effective as physical examinations. As reported, students have difficulties in answering certain questions in the examination without being exposed to practical sessions as in the case of undergraduate 3, “we have no practical, and without them it is difficult to answer the questions, all are connected, both theories and practice”. Similarly, as discussed earlier, students have high probability to copy or make another do their examinations, thus their actual performance could not be assessed via online platforms.

Moreover, as participants underscored, current online examinations are unable to maintain the standards of proper examinations, in particular reducing the number of questions and the time duration of the paper has significantly affected the quality of online assessments. Additionally, as lecturers claim, online examinations are not always beneficial, for instance, English language skills, in particular, writing competencies cannot be effectively evaluated through online examinations; “students can copy paste and even the plagiarism detection software can be used throughout, especially if the student number is high (L 5). Despite these concerns, lecturers tended to give additional time to the undergraduates for the submission of their answer scripts and assessments as they were aware of the physical, economical, psychological, and technical issues that undergraduates frequently face during this Covid-19 pandemic.

Overall, as indicated, in order to make the online and alternative examination more effective, a) both students and test administrators should have the access to the internet, b) electricity and other facilities should be made available to all, and c) necessary training should be provided to enhance technical skills and strategies of using ICT devices.

CONCLUSION AND IMPLICATIONS

Although the transition is required from traditional assessment methods to online tests in order to keep up with global trends and changes, this transition has unfavorably affected university students. As revealed by the study, online examinations could not accurately assess the unit learning outcomes in terms of the undergraduates’ knowledge, skills, attitudes, and mindset. Furthermore, students’ knowledge cannot be accurately determined given the opportunities they have for cheating during online examinations. Besides, undergraduates and lecturers have encountered several challenges and issues during online testing. According to the findings, online tests in Sri Lankan state universities are effective to a considerable extent, but they can be developed as a possible form of assessment with more changes and up-

grades. The study highlights the need for Sri Lanka to develop a robust online teaching and examination system that can cater for any circumstances without affecting the country's education system.

The study has implications for the university academics and the management to determine the methods of online examinations that can reduce the undergraduates' stress levels during this COVID-19 pandemic. Furthermore, the findings have consequences for the University Grant Commission in terms of identifying the appropriate standards and methods of assessment in order to successfully evaluate student performance and reduce the chances of cheating during online examinations. Moreover, the research has implications for the school teachers and students to understand the necessary methods to make online evaluation effective.

Recommendations

During the current COVID-19 epidemic, online examinations are becoming increasingly popular. In this competitive period, every university is seeking for high-quality and low-cost examination methods. However, universities should plan their online assessments in a way that address the requirements of both undergraduates and university management. The study suggested several ways to enhance the effectiveness of online examinations. As reported, the number of multiple assessments and presentations given for every subject/unit should be limited and students' learning outcomes should be measured through Narrated PowerPoint Presentations and Extensive Oral Examinations rather than written assessments.

Furthermore, the findings emphasize the importance of allowing enough time for students to relax during online exams in order to improve their psychology and mental health, this points to the need of conducting online examinations within the necessary time gaps. In addition, as participants reported, test designers should prepare questions in a way students cannot find answers from Google or any other sources during the Open Book examinations. It is also suggested to provide training for both undergraduates and test administrators to guide them how to use the necessary software during online assessments

Limitations and Future Research Directions

Due to COVID-19 travel restrictions and lockdown, the necessary data for the research was collected through Google forms and telephone interviews. Since there was no proper and official way to contact the lecturers of the other universities, the current study was limited to the perspectives of the lecturers serving in two state universities in Sri Lanka. Similarly, the data were gathered only from the undergraduates of four selected state universities in Sri Lanka which offer the Bachelor of Science Degree (BSc). If participants had been taken from a few other state universities findings would have been generalized.

Future research can be conducted with other degree programs in the Sri Lankan state universities to explore the effectiveness of online examinations. Furthermore, a study can be undertaken to examine the necessary methods and services that need to be implemented in Sri Lankan universities to ensure that the online assessments are conducted in an effective manner. In the "new normal," research should focus on the effective methods that can be used to assess students' learning outcomes accurately while reducing their anxiety and negative psychological consequences. Concurrently, by gathering data from students and teachers, a study can be undertaken to explore the efficacy of online evaluation in schools.

REFERENCES

- Abeywickrama, K. R. (2019). Teacher engagement and professional development initiatives: A case study of university ESL teachers in Sri Lanka. *Unpublished doctoral dissertation. Deakin University, Australia.*
- Abeywickrama, K. R. (2020). Professional Development (PD) for ESL teachers' knowledge orientation: An empirical study. *American Journal of Humanities and Social Sciences Research*, 4(5), 107-119.
- Abeywickrama, R. (2021a). Professional development and ESL teacher quality: An empirical study. *Sri Lanka Journal of Social Sciences and Humanities (SLJSSH)*, 1(2), 51-58.
- Abeywickrama, R. (2021b). Perceptions, engagement and productivity of teacher Professional Development (PD). *Journal of Humanities*, 27, 93-117.
- Alipio, M. (2020) *Education during Covid-19 Era: Are learners in a less economically developed country ready for E-Learning?* Retrieved from <https://ideas.repec.org/p/zbw/esrepo/216098.html>
- Allen, I. E., & Seaman, J. (2011). *Going the distance: Online education in the United States, 2011.* Retrieved from <https://files.eric.ed.gov/fulltext/ED529948.pdf>
- Allen, I. E., & Seaman, J. (2014). *Grade change. Tracking online education in the United States.* Retrieved from <https://www.bayviewanalytics.com/reports/gradechange.pdf>
- Allen, I. E., Seaman, J., Straut, T. T., & Poulin, R. (2016). *Online report card tracking online education in the United States.* Retrieved from <https://files.eric.ed.gov/fulltext/ED572777.pdf>
- Allen, I.E., & Seaman, J. (2007). *Making the grade: Online education in the United States, 2006.* Retrieved from <https://files.eric.ed.gov/fulltext/ED530101.pdf>
- Ashworth, P., & Lucas, U. (2000). Achieving empathy and engagement: A practical approach to the design, conduct, and reporting of phenomenographic research. *Studies in Higher Education*, 25(3), 295-308.
- Attride-Stirling J. (2001). Thematic networks: An analytical tool for qualitative research. *Qualitative Research*, 1(3), 385-405.
- Bahadur, B., Khadka, B.K., Roka, J., & Bhatta, P.D. (2020) Perceptions, issues, and challenges towards online and alternative examinations system: A case of Mid-western University. *International Journal of Innovative Science and Research Technology*, 5(11), 105-114.
- Basiliaia, G. (2020). Replacing the classic learning form at universities as an immediate response to the covid-19 virus infection in Georgia. *International Journal for Research in Applied Science and Engineering Technology*, 8(3), 101-108.
- Braun V., Clarke V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101.
- Brown, T.H., & Mbatia, L.S., (2015). Mobile learning: Moving past the myths and embracing the opportunities. *The International Review of Research in Open and Distributed Learning*, 16(2), 115-135.
- Cohen, L., & Manion, L. (1994). *Research methods in education (4th ed.)*. London: Routledge.
- Coldwell, M., & Maxwell, B. (2018). Using evidence-informed logic models to bridge methods in educational evaluation. *Review of Education*, 6(3), 267-300.
- Gajadeera, S. R. (2006). *An exploration of the challenges of sustainable and effective professional development for English as second language teachers in Sri Lanka.* Unpublished doctoral dissertation. University of Wollongong, Australia.
- Gamage, K.A.A., Silva, E.K., & Gunawardhana, N. (2020). Online delivery and assessment during covid-19: Safeguarding academic integrity. *Education Science*, 10(11), 1-24.
- Hamzah, F.A.B., Lau, C.H., Nazri, H., Ligot, D.V., Lee, G., Tan, C.L., Shaib, M.K.B.M., Zaidon, U.H.B., Abdullah, A.B., Chung, M.H., Ong, C.H., Chew, P.Y., & Salunga, R.E. (2020). *Corona Tracker: Worldwide covid-19 outbreak data analysis and prediction.* Retrieved from https://www.who.int/bulletin/online_first/20-255695.pdf
- Haththotuwa, P. A. (2021). Adapting to online learning in the higher education system during the covid-19 pandemic: A case study of universities in Sri Lanka. *Sri Lanka Journal of Social Sciences and Humanities*, 1(2), 147-160.
- Hayashi, R., Garcia, M., Hewagamage, K.P., Maddawin, A. (2021). Online learning in Sri Lanka's higher education institutions during the covid-19 pandemic. *Asian Development Bank Briefs*, 151, 1-12.

- Hitchcock, G., & Hughes, D. (1995). *Research and the teacher: A qualitative introduction to school-based research* (2nd ed.). London: Routledge.
- Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). *The difference between emergency remote teaching and online learning*. Retrieved from <https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning>
- Howard, A., & Donaghue, H. (2015). *Teacher evaluation in second language education*. New York: Bloomsbury.
- Huang, C., Wang, Y., Li, X., Ren, L., Zhao, J., Hu, Y., Zhang, L., Fan, G., Xu, J., Gu, X., Cheng, Z., Yu, T., Xia, J., Wei, Y., Wu, W., Xie, X., Yin, W., Li, H., Liu, M., Xiao, Y., Gao, H., Guo, L., Xie, J., Wang, G., Jiang, R., Gao, Z., Jin, Q., Wang, J., & Cao, B. (2020). Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *The Lancet*, 395, 497-506.
- Islam, A.K.M.N. (2016). E-learning system use and its outcomes: Moderating role of perceived compatibility. *Telematics and Informatics*, 33(1), 48-55.
- Khan, M.A., Vivek, V., Khojah, M., Nabi, M.K., Paul, M., & Minhaj, S.M. (2021). Learners' perspective towards e-exams during covid-19 outbreak: Evidence from higher educational institutions. *International Journal of Environmental Research and Public Health*, 18(12), 1-18.
- Kiger, M.E., Meyer, H.S., Hammond, C., Miller, K.M., Dickey, K.J., Hammond, D.V., & Varpio L. (2019). Whose patient is this? A scoping review of patient ownership. *Academic Medicine*, 94(11S), 95-104.
- Kizlik, B. (2019). *How to write an assessment based on a behaviorally stated objective*. Retrieved from <http://www.adprima.com/assessment.htm>
- Kornell, N., & Son, L. K. (2009). Learners' choices and beliefs about self-testing. *Memory*, 17(5), 493-501.
- Lichtman, M. (2013). *Qualitative research in education: A user's guide* (3rd ed.). Thousand Oaks, CA: Sage Publications.
- Luong, N.T., Vu, N.N., Lien, N.T.H. (2021). Mobile learning for physical education students in Vietnam: Promises and challenges. *European Journal of Physical Education and Sport Science*, 6(11), 131-144.
- Murphy, M. P. (2020). Covid-19 and emergency elearning: Consequences of the securitization of higher education for post-pandemic pedagogy. *Contemporary Security Policy*, 41(3), 492-505.
- Palvia, S., Aeron, P., Gupta, P., Mahapatra, D., Parida, R., Rosner, R., & Sindhi, S. (2018) Online education: Worldwide status, challenges, trends, and implications. *Journal of Global Information Technology Management*, 21(4), 233-241.
- Patton, M. Q. (2002). *Qualitative research & evaluation methods* (3rd ed.). Thousand Oaks, CA: Sage Publications.
- Plancher, K. D., Shanmugam, J. P., & Petterson, S. C. (2020). The changing face of orthopedic education: Searching for the new reality after covid-19. *Arthroscopy, Sports Medicine, and Rehabilitation*, 2(4), 95-98.
- Platt, L. D. (2003). Staying the course. *Ultrasound in Obstetrics and Gynecology*, 21(1), 13-14.
- Prince, D. J., Fulton, R.A., & T. W. Garsombke. (2009). Comparisons of proctored versus non-proctored testing strategies in graduate distance education curriculum. *Journal of College Teaching and Learning*, 6 (7), 51-62.
- Rameez, A., Fowsar, M.A.M., & Lumna, N. (2020). Impact of covid-19 on higher education sectors in Sri Lanka: A study based on South Eastern University of Sri Lanka. *Journal of Educational and Social Research*, 10(6), 341-349.
- Razeeth, M.S.S., Kariapper, R.K.A.R., Pirapuraj, P., Nafrees, A.C.M., Rishan, U.M., & Ali, S.N. (2019). *E-learning at home vs traditional learning among higher education students: A survey-based analysis*. Paper presented at the 9th International Symposium, South Eastern University of Sri Lanka.
- Roediger, H. L., Putnam, A.L., & Smith, M.A. (2011). Ten benefits of testing and their applications to educational practice. *Psychology of Learning and Motivation*, 55, 1-36.
- Roffe, I. (2004). *Innovation and e-learning: E-business for an educational enterprise*. Cardiff: University of Wales Press.
- Rueda, M.M., Rosa, A.L., Serrano, J.L.S.S., & Cerero, J.F. (2021). Assessment in higher education during the covid-19. *Sustainability*, 13(19), 1-13.
- Schlenz, M.A., Schmidt, A., Wöstmann, B., Krämer, N., & Weidner, N.S. (2020). Students' and lecturers' perspective on the implementation of online learning in dental education due to SARS-CoV-2 (Covid-19): A cross-sectional study. *BMC Medical Education*, 20, 1-7.
- Shelton, K., & Saltsman, G. (2005). *An administrator's guide to online education*. Greenwich, CT: Information Age Publishing.
- Silva, N.D. (2021). *Covid-19 and online education in Sri Lanka: Can we do it better?* Retrieved from <https://www.ft.lk/columns/COVID-19-and-online-education-in-Sri-Lanka--Can-we-do-it-better-/4-719254>
- Stannard, R. (2020). *Online education: Evaluation and assessment when teaching online*. Retrieved from <https://www.onestopenglish.com/online-teaching/online-education-evaluation-and-assessment-when-teaching-online/1000055.article>
- Stanton, L. (2021). *How online learning is different from classroom learning*. Retrieved from <https://www.alphr.com/online-learning-different-classroom-learning/>
- Stauffer, B. (2020). *What's the difference between online learning and distance learning?* Retrieved from <https://www.aeseducation.com/blog/online-learning-vs-distance-learning>
- Sundarasan, S., Chinna, K., Kamaludin, K., Nurunnabi, M., Baloch, G.M., Khoshaim, H.B., Hossain, S.F.A., & Sukayt, A. (2020). Psychological impact of covid-19 and lockdown among university students in Malaysia: Implications and policy recommendations. *International Journal of Environmental Research and Public Health*, 17(17), 1-13.
- Teng, D., Chen, N., Kinshuk, & Leo, T. (2012). Exploring students' learning experience in an international online research seminar in the Synchronous Cyber Classroom. *Computers & Education*, 58(3), 918-930.
- Thomas, A. K., & McDaniel, M. A. (2007). Metacomprehension for educationally relevant materials: Dramatic effects of encoding-retrieval interactions. *Psychonomic Bulletin & Review*, 14(2), 212-218.
- Thomas, P., Price, B., Paine, C., & Richards, M. (2002). Remote electronic examinations: Student experiences. *British Journal of Educational Technology*, 33(5), 537-549.
- Trost, K. (2009). Psst, have you ever cheated? A study of academic dishonesty in Sweden. *Assessment & Evaluation in Higher Education*, 34(4), 367-376.
- UNESCO. (2020). *290 million students out of school due to covid-19: UNESCO releases first global numbers and mobilizes response*. Retrieved from <https://en.unesco.org/news/290-million-students-out-school-due-covid-19-unesco-releases-first-global-numbers-and-mobilizes>
- University Grants Commission. (2020). *Guidelines for conducting alternative assessments in universities and HEIs*. Retrieved from https://www.ugc.ac.lk/attachments/2235_Commission%20Circular%20No.11_2020%20English.pdf
- Varpio, L., Kiger, M. E. (2020). Thematic analysis of qualitative data. *Medical Teacher*, 42(8), 846-854.
- Weir, J. C., & Roberts, J. (1994). *Evaluation in ELT*. Oxford: Blackwell
- Whitley, B. E. (1998). Factors associated with cheating among college students: A Review. *Research in Higher Education*, 39(3), 235-274.
- Woit, D., & Mason, D. (2003). Effectiveness of online assessment. *SIGCSE Bulletin*, 35(1), 137-141.
- Xu, D. & Wang, H. (2011) *Integration of knowledge management and e-learning*. *Encyclopedia of Knowledge Management*. Retrieved from <https://www.igi-global.com/chapter/integration-knowledge-management-learning/48993>
- Yan, C. H., Faraji, F., Prajapati, D.P., Boone, C.E., & DeConde, A.S. (2020). Association of chemosensory dysfunction and covid-19 in patients presenting with influenza-like symptoms. *International Forum of Allergy and Rhinology*. 10(7). 806-813.
- Yang, C. L. (2020). Coronavirus disease 2019: A clinical review. *European Review for Medical and Pharmacological Sciences*, 24(8), 4585-4596.
- Zadrozny, J., McClure, C., Lee, J., & Jo, I. (2016). Designs, techniques, and reporting strategies in geography education: A review of research methods. *International Geographical Education*, 6(3), 216-233.
- Zu, Z. Y., Jiang, M.D., Xu, P.P., Chen, W., Ni, Q.Q., Lu, G.M., & Zhang, L.J. (2020). Coronavirus disease 2019 (covid-19): A perspective from China. *Radiology*, 296(2), 15-25.

