A Study on the Academic Quality Compliances for Online-Based Examinations at Higher Education Institutions in Kuala Lumpur

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Abstract:

In the rapidly evolving landscape of higher education, the shift towards online-based examinations has become a prominent feature. This study aims to investigate the academic quality compliances associated with the implementation of online-based examinations in higher education institutions within Kuala Lumpur. The research is motivated by the growing reliance on technology in education and the need to ensure that online assessment methods meet established academic standards.

The study adopts a mixed-methods research design, combining quantitative surveys and qualitative interviews. A sample of higher education institutions in Kuala Lumpur will be selected to participate in the study, encompassing diverse academic disciplines and varying sizes of institutions. The quantitative phase involves administering surveys to students, faculty members, and administrators, focusing on their experiences, perceptions, and challenges related to online-based examinations. Concurrently, the qualitative phase includes in-depth interviews with key stakeholders to gain deeper insights into the nuances of compliance issues.

The research aims to identify the key academic quality compliances pertinent to online-based examinations, considering factors such as security, integrity, fairness, and reliability. Additionally, the study will explore the effectiveness of existing measures and strategies implemented by institutions to address these compliances. Findings from both the quantitative and qualitative analyses will be triangulated to provide a comprehensive understanding of the current state of academic quality compliances in online examinations.

The outcomes of this research will contribute valuable insights to higher education institutions, policymakers, and educational technologists. Recommendations for enhancing academic quality in online-based examinations will be proposed, taking into account the unique challenges and opportunities within the educational context of Kuala Lumpur. Ultimately, the study aims to inform the development of robust guidelines and best practices for ensuring the integrity and effectiveness of online-based examinations in higher education institutions.

KeyTerms: Online-based examination, proctored examination, Academic Quality Compliance, Education dishonesty, challenges in online-based examination, HEP, ODL.

Online-based examination – Exams that are conducted using online software or systems designed by respective higher education institutions.

Proctored examination – Exams that are conducted online with vigilance to monitor the performance using a fixed quality measure.

Academic quality compliance – Ensuring standard operating procedures set are managed and used for quality measures. Structured systems to be places and followed.

Education Dishonesty – Investigation or evaluating the integrity of an academia or higher learning institutions in terms of properly managed protocols and policies being followed. Any compromise made in convenience could be resulted as academic dishonesty.

Challenges in online-based examinations – Factors that affect and interrupt a plan while managing the online-based exams using the set procedures and policies.

HEP – Higher Education Provider

ODL – Online Distance Learning

Introduction:

With the rise of technology in education, online-based examinations have become increasingly popular among students and educational institutions. Online-based examinations offer many benefits, including flexibility and convenience, but they also raise concerns about academic quality and the ability to maintain academic integrity.

In traditional examinations, invigilators can easily monitor students to prevent cheating and ensure academic quality. However, online-based examinations require the use of digital tools, such as secure systems and proctoring software, to ensure academic integrity. The effectiveness of these tools in maintaining academic quality and integrity is a subject of ongoing debate and research.

The use of online-based examinations has increased significantly in recent years, with one study reporting that 64% of institutions in the United States offered online exams in 2018 (Jaggars, 2018). This trend is likely to continue as technology advances and students increasingly demand flexible learning options.

Academic misconduct, such as cheating, is a significant concern with online-based examinations. A study of students in higher education found that 33% of respondents admitted to cheating in online exams (Buczynski et al., 2020). Institutions have responded by implementing a range of strategies to prevent cheating, such as remote proctoring, plagiarism detection software, and randomized questions (Harper-Marinick et al., 2021).

The success of online-based examinations in maintaining academic quality and compliance depends largely on the effectiveness of these strategies and technologies. A study by Sibanda and Maringe (2021) found that the use of remote proctoring and plagiarism detection software significantly reduced the incidence of academic misconduct in online examinations.

The COVID-19 pandemic has accelerated the adoption of online-based examinations, with one survey finding that 94% of institutions worldwide offered online exams during the pandemic (Times Higher Education, 2020). This rapid shift has highlighted the need for institutions to continuously review and improve their procedures to ensure academic integrity.

The pandemic had enforced severe changes in the planning, monitoring and managing of educational systems from the usual conventional mode towards an enforced online or virtual based. Millions of learners were affected by educational institution closures due to the pandemic, which resulted in the largest online movement in the history of education. (Thomas Mandl, 2021). In reflection of it, all examinations were conducted online and the education community had learned a new dimension in study options. Morning forward, online based assessment or electronic examinations, became a comfort for learners and

facilitators. The discussion that concerns most is the academic integrity in lieu to quality compliances. This study will encompass research in the management of academic quality compliances about online-based examination, its challenges and outcomes. Analysis on the differences and similarities on online based examination. Online-based examinations have become increasingly popular in recent years, particularly with the rapid development of technology and the internet. These types of exams can be either synchronous (live) or asynchronous (self-paced). In this analysis, we will discuss the similarities and differences between synchronous and asynchronous online-based examinations. Whereby, both synchronous and asynchronous exams can be taken remotely from anywhere with an internet connection and both types of exams can be designed to have multiple-choice, short-answer, or essay-style questions. Aside to that, both exams require a stable internet connection and a device that meets the technical requirements to take the exam.

Nevertheless, the differences seen are, synchronous exams require test-takers to log in at a specific time and take the exam in real-time. In contrast, asynchronous exams can be taken at any time during a designated window and usually have a proctor who monitors the test-takers during the exam, while asynchronous exams typically do not. Besides that, synchronous exams typically have a fixed time limit for each section, whereas asynchronous exams may have a time limit for the entire exam or no time limit at all. On the other hand, synchronous exams require test-takers to have uninterrupted access to the internet throughout the entire exam, while asynchronous exams allow test-takers to save their progress and continue later if they experience connectivity issues. Synchronous exams often require a webcam and microphone to be turned on during the exam, while asynchronous exams do not.

Problem Statement:

Academic Integrity Statement for online exams

Academic integrity is a critical value in the academic community. It is essential for maintaining the credibility and trustworthiness of academic institutions, and it ensures that the achievements of students reflect their own abilities and efforts. Academic integrity includes a commitment to honesty, fairness, and responsibility, and it requires students to adhere to ethical standards in all academic activities, including exams.

However, maintaining academic integrity during online exams presents unique challenges. With the rise of remote learning and online education, academic institutions must find new ways to ensure that students are not engaging in academic dishonesty. Online exams are particularly vulnerable to cheating, plagiarism, and collusion, which can compromise the fairness and validity of the assessment process and undermine the value of the degree.

One of the main problems with online exams is that they are often un-proctored, meaning that students can take the exams in any location without any supervision or monitoring. This lack of oversight makes it easier for students to cheat, as they may have access to unauthorized materials, collaborate with others, or use online resources to find answers. Additionally, online exams can be easily replicated, shared, or sold, which increases the risk of academic misconduct and compromises the security of the exam.

Another problem is that online exams often rely on multiple-choice questions or other objective measures, which may not accurately assess students' knowledge, skills, and abilities. These types of questions are easier to cheat on because they require students to choose from a limited set of options, rather than generating original responses. Furthermore, objective measures may not reflect the complexity, depth, and creativity of the subject matter, and they may not provide opportunities for students to demonstrate their

critical thinking, problem solving, or communication skills. A further challenge is that online exams require students to have access to technology and internet connectivity, which may not be available to all students. This digital divide can create inequalities and disadvantage some students, particularly those from low-income backgrounds or rural areas, who may not have the same resources or support as their peers. Additionally, some students may experience technical difficulties or glitches during the exam, which may unfairly influence their performance and affect their grades.

Literature Review:

Online-based examinations have become increasingly popular due to the widespread use of technology in education. However, they come with specific compliance requirements to ensure their validity and reliability. This literature review aims to provide an overview of the compliance issues associated with online-based examinations and the measures required addressing them. Online-Based Examinations refer to exams that are taken over the internet or a computer network. These exams have several benefits, including convenience, accessibility, and flexibility. They can be taken from anywhere, at any time, and by anyone with an internet connection, while compliance issues on online-based examinations require specific compliance considerations to ensure their validity and reliability. The following are some of the compliance issues that need to be considered.

Apart to that, the security measures are also one of the significant concerns with online-based examinations is security. Exams must be protected from unauthorized access, cheating, and fraud. This can be achieved through appropriate authentication procedures, such as passwords or biometrics. Lee et al. (2018) highlights the need for secure exam delivery systems that ensure confidentiality, data integrity, and system reliability. Nevertheless, online-based exams should be accessible to all candidates, regardless of their disabilities. This can be achieved by providing alternative formats of the exam, such as audio or Braille, and ensuring that the exam software is compatible with assistive technologies. These measures are required to ensure that all students can access and take the exams without discrimination. Freire et al. (2018) recommend that institutions adopt accessibility standards, such as the Web Content Accessibility Guidelines (WCAG), to ensure compliance with accessibility regulations.

Data privacy is another critical concern when conducting online-based exams. Candidates' personal information and exam results must be protected and kept confidential. Appropriate measures, such as encryption and data protection, should be put in place to ensure that the data is secure. The European Union General Data Protection Regulation (GDPR) requires institutions to protect candidate data and ensure its privacy. Knežević et al. (2020) emphasize the need to comply with data protection laws to prevent unauthorized disclosure and use of personal data.

Another major concern for higher learning institutions would be that the integrity on online-based exams must be conducted with integrity. This means that the exam questions must be valid and reliable, and the grading system must be fair and accurate. The exam should be designed in such a way that it assesses the candidate's knowledge and skills accurately. Giannakos et al. (2019) recommend that institutions adopt quality assurance measures to ensure the validity and reliability of online-based exams.

Online-based examinations have several benefits over traditional paper-based exams. However, they come with specific compliance requirements, including security, accessibility, data privacy, and integrity. Institutions must adopt appropriate measures to ensure compliance with these requirements and ensure the validity and reliability of online-based exams. By addressing these compliance issues, institutions can provide a fair and equitable examination experience for all candidates.

Online exams were perceived to have significant benefits over traditional, paper-based examinations, including reliability of grading and efficiency in terms of time, effort and money spent on the exam process. Conversely, participants identified many challenges facing the successful implementation of online exams regarding security, validity, and fairness issues. The findings also indicate that e-exams are particularly suitable for formative assessment, for measuring learning rather than the summative assessment of learning. The successful implementation of online exams depends on designing them to be valid, reliable, secure and flexible. (Dr. Khitam-Shraim 2019). Academic integrity entails commitment to the fundamental values of honesty, trust, fairness, respect, responsibility, and courage (Fishman, 2014) and in recent times, the way of educational assessments predominantly online examination has become the preferred choice and the quality compliances is the major concern, thus several research has been conducted in reviewing this study. Integrity and quality of assessments on the online platform should be upheld to ensure that it supports student learning as well as the efficacy of teaching because in the end it measures the reputation of an institution. (Pedagogical Research, 2022). International Journal of Information and Educational Technology stated (January 2022), due to lack of in-person interactions and monitoring, assessments in online courses may be more susceptible to contract cheating, collusion, fabrication and other types of academic misconduct than the assessments in face-to-face courses. Simultaneously, Journal of Academic and Business Ethics (2011) does clearly support the above statement by mentioning on the need for academic institutions to have proctor supervisions for exams which are online based to maintain academic integrity. Nevertheless, with the introduction of technology into the classroom and the popularity of online classes, new opportunities for "e-cheating" exist (e.g. Harmon and Lambrinos, 2008; King and Case, 2014). Integrity is an important aspect of the education dynamic and is the foundational rule in examination protocols. Thus, adherence to the protocols deliberates proper compliances and the management of academic quality. There are several literatures exist on the importance of proper online based examination management. The non-complying concerns may vary from cheating, leakage, copying, and non-conformity towards set examination SOP's and sharing of assessment submissions. Muna R. Hameed, Firas. A. Abdullatif (March 2017), stated that, the main goal of this online examination system is to effectively evaluate the student thoroughly through a totally automated system that not only reduce the required time but also obtain fast and accurate results. According to, Mukt Shabd Journal 2020, students have significantly favoured digital assessment for various reasons, such as online exams save students the hassle of putting pen to paper to demonstrate their knowledge in an area of study, it is also likely that making them familiar with such an interface and process will also be helpful for students in events such as training and testing even in the future while stepping into the professional world let alone the academic assessment online and digital assessment ensures cent percent accuracy and with rare chances of fraudulence. Ana and Paul have developed an online examination system based on multiple-choice questions (Ana and Bukie 2013). In addition to the shortfalls of the multiple-choice questions as a strategy for summative evaluation, it does not work well for at-home un-proctored online exams. Therefore, there is a need to work on the design of the exam questions, in particular measuring the desired learning outcomes achieved by each student. (Bengtsson 2019), promoted take-home exams as an alternative to traditional exams. However, take-home exams are not recommended due to the huge risk of unethical student behaviour. The rise of online-based examinations has been a result of the increasing use of technology in education. However, the shift towards online-based examinations has raised concerns about academic quality and integrity. A review of the literature reveals that several compliance requirements are essential for online-based examinations to maintain academic quality and integrity.

Secure systems: One of the critical compliance requirements for online-based examinations is the use of secure systems. These systems must be designed to prevent hacking and unauthorized access to examination content. It is also necessary to ensure that the systems are stable and reliable, to prevent system failures during examinations. Proctoring software, the use of proctoring software is another critical compliance requirement for online-based examinations. Proctoring software can be used to monitor students during examinations to prevent cheating. The software can detect unauthorized behaviour such as the use of notes, multiple windows, or tabs, or talking to someone during an examination. However, there are concerns about privacy invasion and the accuracy of proctoring software. Verification of student identities: Verifying student identities is another important compliance requirement for online-based examinations. Institutions must ensure that the student taking the exam is the person they claim to be. Verification of student identities can be done through several methods, such as using biometric data, facial recognition software, or government-issued identification. Impact of online-based examinations on student performance and satisfaction: There is ongoing research on the impact of online-based examinations on student performance and satisfaction. Some studies suggest that online-based examinations can improve student performance, while others suggest that traditional examinations are more effective in assessing student learning. There is also evidence that online-based examinations can negatively impact student satisfaction, primarily due to technical difficulties and a lack of interaction with instructors.

Methodology:

A cross sectional study design with qualitative approach will be used. The study methodology, which will be used by the author, will be online google-survey and interview sessions. The author will expand the study and research for this in the future by increasing the sampling and research dimension. The data will be further demonstrated using reviews and explanation from the study and as it will provide transparent information from the investigation conducted. The survey and observation will be conducted at the proposed sample institutions during the examination period. However, the effectiveness of the qualitative approach used in this study will highly depend on the ability of the researcher to observe and critically analyse the online-based examination sessions as proposed and produce critical analysis. The outcomes will be interpreted through assumptions and judgements that is made during the interview and observation periods. Because it is more appropriate for small samples, it is also risky for the results of qualitative research to be perceived as reflecting the opinions of a wider population (Bell, 2005). Thus, the questions outline will have intrinsic focus on the research area with an extend to ensure the exact manipulation of results in accordance to achieving the expected investigation results. The selected participants emotions, thoughts and perceptions will have a major impact from the methods used as this will enhance critical views to be demonstrated and the results obtained will be the main evaluation for this study. However, there is the risk that the interview may deviate from the pre-specified research aims and objectives (Gill & Johnson, 2002). Simultaneously, the selected participants will be thoroughly briefed on the objective of this study and they will be assured that all the feedback obtained will be treated, private, and confidential. The proposed fundamental in this study's methodology will be the designing of the research by collecting the data through the two steps proposed and thereafter measuring and evaluating the data will be done. Upon achieving satisfactory earning and sufficient samples from the data needed, the researcher will be conducting the final analysis and suggestions. The timeline that has been set is with regards to the online-examination sessions held at the two sample institutes. This study aims to investigate the academic quality

compliances for online-based examinations. The research methodology used for this study is a mixed-method approach, consisting of both qualitative and quantitative methods. The study will be conducted in three phases: the pilot study, data collection, and data analysis.

Discussion:

How does online-based examination reflect on education dishonesty?

Online-based examinations have become increasingly common in education due to the convenience and flexibility they offer. However, they also bring with them the challenge of ensuring academic integrity and preventing dishonesty. One of the main concerns with online-based examinations is the potential for cheating. Students may be tempted to look up answers online, share information with other students, or use prohibited materials. The anonymity and distance of online learning can make it easier for students to engage in dishonest behaviour without fear of being caught. Another issue is the difficulty of verifying student identity and ensuring that the work submitted is actually that of the student. It can be challenging to prevent students from having someone else take the exam for them or from using unauthorized resources. Additionally, the use of technology and the internet can make it easier for students to find and purchase pre-written essays or exam answers, which can further perpetuate academic dishonesty. However, it is important to note that online-based examinations also offer several opportunities for preventing academic dishonesty. For example, many online learning platforms use monitoring tools that can detect suspicious behaviour, such as students switching to other windows or opening new tabs during an exam. In addition, some platforms use proctoring software that records the students' actions and facial expressions during the exam, which can be reviewed later to detect any dishonest behaviour. In conclusion, online-based examinations present both challenges and opportunities for preventing academic dishonesty. While the anonymity and distance of online learning can make it easier for students to engage in dishonest behaviour, technology also offers several tools for detecting and preventing cheating. It is important for educators to be aware of the potential for academic dishonesty in online learning environments and to implement strategies to maintain academic integrity.

How does online-based examinations comply with examination policies?

Online-based examinations have become increasingly popular due to the convenience they offer to both students and teachers. However, ensuring that these types of exams comply with examination policies can be challenging. One of the most important policies that must be considered is academic integrity. Online exams can be vulnerable to cheating and academic dishonesty. To comply with examination policies related to academic integrity, measures must be put in place to prevent cheating. This can include using anti-cheating software, monitoring student behaviour during exams through video surveillance, and incorporating a variety of question types to reduce the likelihood of cheating. Another important policy that must be considered is accessibility. Online exams must be accessible to all students, including those with disabilities. This can include providing accommodations such as extended time or alternative formats for exams. Additionally, online exams must comply with laws such as the Americans with Disabilities Act (ADA) and Section 508 of the Rehabilitation Act. Another policy that must be considered is data privacy. Online exams can involve collecting and storing sensitive information such as student identification and exam results. To comply with examination policies related to data privacy, measures must be put in place to protect this information from unauthorized access or disclosure. This can include using secure servers, encryption, and access controls. In conclusion, online-based examinations can comply with examination policies, but it requires careful planning and implementation. Policies related to academic integrity,

accessibility, and data privacy must be considered and addressed to ensure the exams are fair, accessible, and secure for all students.

The widespread adoption of online-based examinations in higher education has raised concerns about maintaining academic quality and compliance, particularly in light of the potential for academic misconduct such as cheating. As such, institutions have developed and implemented new strategies and technologies to prevent cheating and ensure academic integrity. Remote proctoring and plagiarism detection software are two strategies that institutions have increasingly relied upon to prevent cheating in online-based examinations. Studies have shown that these technologies can significantly reduce the incidence of academic misconduct (Sibanda & Maringe, 2021). However, it is important to note that these technologies are not fool proof and can be expensive to implement. While online-based examinations offer many potential benefits, such as increased accessibility for students with disabilities, they are not without drawbacks. Technical issues and internet connectivity problems can disrupt the examination process, leading to anxiety and frustration for students.

Conclusion:

The aim of this research was to know how academic integrity has been practiced and its appropriateness for on online-based examination and assessments. Based on the outcome, to conclude, the researcher realized that, facilitators and learners prefer online examination due to several factors mentioned in the findings, simultaneously, it supports in achieving better results for both the colleges and students. Aside, most teaching facilitators had shown a preference for the conventional examination mode for quality and integrity assurance and on another note; students find the online mode convenient and effective.

Nevertheless, it is evidential that, integrity or compliances is not practiced due to factors such as incompetent facilities to monitor, inadequate facilities to complete the exams (facilitators perspective), large number of students in an examination session and with the fact that, examinations were done for the sake of having it completed. Thus, concisely, complying to the need to complete a study term with evaluation seem more concerning instead of ensuring integrity in the examination performances. To conclude, the researcher finds that online-based examination will not be appropriate for all levels of education and it may be a proposed or extended use with the best examination proctoring systems in place, of which will require additional investments. For a long-term expansion into electronic based teaching and learning, e-examination is doable with the correct approach.

The need for online-based examinations has increased significantly in recent years due to several factors, including advances in technology, the need for flexibility and convenience, and the COVID-19 pandemic. Online exams provide several benefits, including, Flexibility, Online exams allow students to take tests from anywhere, at any time, without having to be physically present in a specific location. This flexibility is particularly helpful for students with busy schedules or those who live far from their testing centres. Convenience, online exams eliminate the need for students to travel to a testing centre, which can be time-consuming and expensive. With online exams, students can take their tests from the comfort of their own homes. Efficiency, online exams can be graded automatically, which reduces the time and effort required by instructors to grade exams manually. This also allows for quicker turnaround times for exam results. Security, online exams can be designed with advanced security features, such as timed tests, randomized questions, and anti-cheating measures, to ensure the integrity of the exam. Overall, online-based examinations provide a convenient, efficient, and secure way for students to take exams, and are likely to continue to grow in popularity in the coming years. Conclusion, the shift towards online-based

examinations in higher education has raised concerns about academic quality and compliance. Institutions have developed and implemented strategies and technologies, such as remote proctoring and plagiarism detection software, to prevent cheating and ensure academic integrity. However, these technologies are not fool-proof and can be expensive to implement. Additionally, online-based examinations are not without drawbacks, such as technical issues and internet connectivity problems that can disrupt the examination process. This investigative study has highlighted the need for institutions to continuously review and improve their procedures to ensure academic integrity in online-based examinations. It is important to consider the effectiveness of the strategies and technologies implemented the attitudes and perceptions of students and faculty towards them, and the impact of the pandemic on the examination process. Additionally, institutions should consider accessibility for students with disabilities, faculty training and support, privacy concerns, student feedback, and cultural considerations when implementing strategies and technologies to prevent cheating. Overall, online-based examinations offer many potential benefits, but ensuring academic quality and compliance requires ongoing effort and review. By conducting this investigative study, we hope to contribute to the ongoing conversation on how to maintain academic integrity in online-based examinations and improve the quality of higher education. It is our recommendation that institutions continue to invest in effective strategies and technologies, provide ongoing training and support for faculty and staff, and prioritize student feedback to ensure that online-based examinations are accessible, fair, and maintain academic integrity. In conclusion, online-based examinations have become a popular mode of assessment in higher learning institutions.

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