

Article

Online Delivery and Assessment during COVID-19: Safeguarding Academic Integrity

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Abstract: Globally, the number of COVID-19 cases continues to rise daily despite strict measures being adopted by many countries. Consequently, universities closed down to minimise the face-to-face contacts, and the majority of the universities are now conducting degree programmes through online delivery. Remote online delivery and assessment are novel experiences for many universities, which presents many challenges, particularly when safeguarding academic integrity. For example, invigilated assessments, often considered as more secure, are not an option given the current situation and detecting any cheating would be significantly challenging. This paper reviews assessment security in the digital domain and critically evaluates the practices from different universities in safeguarding academic integrity, including associated challenges.

Keywords: academic integrity; COVID-19; remote learning and teaching

1. Introduction

Due to the COVID-19 pandemic, most governments around the world have temporarily closed educational institutions in order to contain the spread of the virus. These closures impact over 60% of the world's student population [1]. According to the UNESCO Institute of Statistical Data, the closure of schools has affected 67.7% of total enrolled learners in 144 countries that have implemented closures. This figure corresponds to learners enrolled at pre-primary, primary, lower-secondary, upper-secondary levels and tertiary education levels. In a recent survey, 86% of college presidents find summer enrollment numbers as their top pressing issue in the face of COVID-19 [2]. In addition to that, graduation ceremonies worldwide have been postponed indefinitely and student/graduate unemployment rates have risen drastically [3–5].

Education providers that cater to all levels of students are transitioning to remote learning and online assessment despite the many challenges that entail. Remote learning or online teaching has affected all branches of education. For example, this has substantially affected the primary education sector since students are overly dependent on teachers, whereas, in both secondary and higher educational sectors, students are faced with the challenge of completing their curricula and preparing for benchmark examinations or final examinations in a short period of time. However, there looms uncertainty about conducting benchmark examinations, particularly in secondary and higher education sector. Examinations cannot be conducted online since they require strict invigilation. Among the challenges faced by educators is academic integrity and student assessment when students are not physically in the classroom. Periodical assessment and evaluation are possible through take-home

assignments, although it poses a threat to academic integrity in certain cases. Much of the writing assignments in the higher education sector that happen without proctoring can still continue to operate during the COVID-19 pandemic.

On 23 March 2020, Cambridge International Examinations (CIE) released a statement announcing the cancellation of Cambridge IGCSE, Cambridge O Level, Cambridge International AS and A Level, Cambridge AICE (Cambridge Advanced International Certificate of Education) Diploma, and Cambridge Pre-U examinations for the May/June 2020 series across all countries [6]. Advanced Placement Exams, SAT (Scholastic Assessment Test) administrations, and ACT (American College Testing) administrations have been moved online and cancelled. In Sub-Saharan Africa (SSA), the West-African Examination Council (WAEC) has issued a notice postponing the WASSCE examination until further notice, due to the COVID-19 outbreak. For Ghanaian candidates taking the West African Senior School Certificate Examination (WASSCE), the West African Examination Council (WAEC) has indicated its readiness to organise an independent exam this year [7]. Tests have been affected in all countries in SSA as a result of COVID-19 precautions [8]. In Sri Lanka, IELTS (International English Language Testing System) examinations have been temporarily suspended, and, starting from the onset of the pandemic in March, the British Council issued a notice prohibiting candidates with recent travels to China from taking the IELTS examination [9]. Moreover, major international exams such as Cambridge IGCSE, Cambridge O/L Exams, Cambridge International AS and A Level, Cambridge AICE Diploma and Cambridge Pre-U have been suspended temporarily [6].

To provide a quick overview of the topic to a wider readership, the Introduction is organized under three subheadings that are crucial to understanding the topic addressed in this paper: Section 1.1 presents an overview of the concept of academic integrity from which branches out the discussion in Section 1.2; the practices of academic integrity in the pre-COVID scenario; and Section 1.3 introduces the concept of assessment security.

1.1. An Overview of Academic Integrity

Defining academic integrity is complex and the definition of academic integrity is mostly based on consensus. According to the International Center for Academic Integrity, academic integrity is defined “as a commitment, even in the face of adversity, to six fundamental values: honesty, trust, fairness, respect, responsibility, and courage” [10].

Teresa ‘Teddi’ Fishman believes that academic integrity movement in the United States was informed by the early turn towards concepts of academic integrity based on the British Higher education models that addressed ethical and moral issues [11]. Universities and higher education providers in the United States enjoy a high degree of autonomy and this autonomy was reassured in 1819 when the “US Supreme Court” ruled that “the government of New Hampshire did not have the legal right to exert managerial authority over a university” [11]. According to Fishman, higher education in the US is autonomous from state or national governance [11] and higher education quality control falls within the mandate of private accrediting agencies [11].

In Australia, academic integrity means “acting with the values of honesty, trust, fairness, respect and responsibility in learning, teaching and research” [12]. Four major legislations and supporting regulations in Australia require universities to uphold academic integrity central to educational standards. These legislations include: (1) The Tertiary Education Quality and Standards Agency Act 2011, (2) The Higher Education Standards Framework (Threshold Standards) 2015, (3) The Education Services for Overseas Students Act 2000 and the related National Code of Practice for Registration Authorities and Providers of Education and Training to Overseas Students 2007 and (4) The Australian Code for Responsible Conduct of Research 2007. Much like the US, Australia also considers primacy of institutional autonomy as the topmost priority concerning academic integrity [12]. Principle 2 is based on collective responsibility of the staff and students, while Principle 3 states the importance of the wholistic university approach to academic integrity. In practice, however,

international students in Australian universities, specifically the Chinese students, are reportedly less accustomed to academic integrity practices in Australia. Tracey Bretag writes how Ballard and Clanchy (1991) first identified the difficulties Chinese students had in citing others' work according to Western academic conventions [13] (p. 24). In Australia, academic integrity is referred to as "educational integrity" since academic integrity is understood as a commitment not only from students but also from everyone involved in higher education [13]. The idea that academic integrity is more than a commitment from students resonates with UK's understanding of academic integrity. Bretag quotes an excerpt from the Asia Pacific Forum on Educational Integrity (APFEI) website explaining that "educational integrity" is "multi-dimensional" and it is only possible through a joint effort of everyone in the "educational enterprise, from students to teachers, librarians, advisors, research colleagues and administrators" [13]. With this explanation, it is evident why APFEI introduces 'integrity' with 'educational' rather than just pairing 'integrity' with the conventional term 'academic'.

Academic from Vrije Universiteit Amsterdam reveals that "not everyone is bothered to think about integrity. Integrity doesn't always come on the agenda. Paying attention is a challenge" [14]. Another academic from the University of Reading highlighted "pressure to perform, academics are under pressure to offer high-quality education to students, Students are under pressure too, financial pressure, families, parents, society", which makes them take shortcuts [14]. Speaking of academic integrity, an Education Fellow from the University of New South Wales shares the following: "We have moved from a world of information scarcity to a world of information overload. It makes it difficult for institutions to assess whether the work of students is the work of their own or not" [14]. Contrary to these perspectives is another academic who recognised that students do not deliberately engage in academic misconduct and believes that plagiarism is caused by "lack of familiarity with plagiarism in general—lack of familiarity with plagiarism software". He further states that "even the staff fails to understand the difference between similarity and plagiarism" and this has created a change in the role of the staff: "Instead of being a mentor, they take on a detective role. It is not productive for the student's development. My personal experience is that students do not want to plagiarise but they are very often unaware of referencing if they had come from a different culture" [14]. The different attitudes (of academics) enumerated under this section show the different perspectives on academic integrity across different countries and contexts which makes it intriguing for us to examine how academic integrity is practiced across academia.

1.2. Practices of Academic Integrity—Pre-COVID-19 Scenario

Academic integrity practices in different countries in the pre-COVID-19 context is diverse. Universities in certain countries pioneered academic integrity policy. In the context of academic integrity in the USA, establishing the International Center for Academic Integrity (ICAI) was a leap in the development of academic integrity. The ICAI was founded (as the Center for Academic Integrity) in 1992 in response to alarming research on the subject conducted by Founding President Donald McCabe [11] (p.16).

As Australian universities were addressing issues around internationalisation, academic standards, plagiarism, and higher education a similar challenge was faced by the higher education providers in the UK. In particular, the Office of the Independent Adjudicator for Higher Education in the UK "called attention to inconsistencies in penalties for plagiarism across the higher education sector" [13] (29). Eventually, this developed the project Academic Misconduct Benchmarking Research (AMBeR) and led to a nationwide approach to detecting and dealing with plagiarism. This approach relies heavily on the text-matching software Turnitin [13] (29). Academic integrity is an overarching term for the commitment to uphold six fundamental values in academic practice in order to prevent a wide range of dishonest activities. However, discourses on academic integrity extensively discuss the issue of plagiarism and the most widely used strategy to cope academic integrity at present is text-matching software. This sidelines other threats to academic integrity. Yet, discussing plagiarism is particularly important in the discourse of academic integrity for two reasons: It is the most common act of academic

misconduct that threatens academic integrity and it is the most frequently detected act of dishonesty. Text-matching software is, therefore, in the forefront in the academic integrity discourse. The constant connection made between academic integrity and text-matching software perpetuates the fallacy that academic dishonesty means plagiarism when, in fact, academic dishonesty is constituted by a wide range of dishonest activities.

While most universities worldwide uncritically employ Turnitin as their sole tool in detecting plagiarism, writers in the USA and elsewhere have been less welcoming of the software (13) (29). These writers maintain that Turnitin is erroneously marketed as “plagiarism detection software”. Bretag also states that no software can “detect plagiarism” and the only way in which Turnitin achieves this is by highlighting text matches [13] (29). It has now been established to a considerable extent across academia that text-matching software or the so-called plagiarism-detection software is not foolproof and that its use is mostly limited to identifying potentially problematic cases, which are then reviewed and addressed by respective authorities. A considerable number of academic staff are concerned about Turnitin’s risk of establishing an adversarial relationship between teacher and student. Howard states that grappling with plagiarism makes the staff become enemies rather than the mentors of students and that this situation replaces the “student-teacher relationship with the criminal/police relationship” [13] (p. 29). It also resonates with Ken Tann’s idea about academics becoming “detectives” in order to track plagiarism and its negative impact on student development [15]. Howard further states that academic staff may run into the risk of “categorising” all students as “criminals” if plagiarism is considered a “unitary act rather than a collection of disparate activities” [13]. Most importantly, Howard recognises the need of major pedagogical revision [13].

Australia’s concerns for academic integrity encouraged academics, researchers, and policy planners to take on research projects on academic integrity and policy development. One such project is the Academic Integrity Standards Project (AISP) that aimed at developing shared understanding about academic integrity across Australian higher education providers and “improving alignment of academic integrity policies and their implementation” [13] (p. 31).

The UK’s Higher Education Review process implemented by the Quality Assurance Agency (QAA) is the national system in place for assuring the quality and standards of higher education [15] (43). They monitor and advise on standards and quality in UK higher education and ensure students working towards a UK qualification get the higher education experiences they are entitled to expect [16].

In Canada, the practice of monitoring higher education quality assurance remains within the compass of the provincial level rather than the national level. For instance, quality assurance in the University of Calgary is done by a separate body within the state of Alberta where the University is situated in. In the province Alberta, quality assurance is overseen by the Campus Alberta Quality Council. It operates separately from the government, but “makes recommendations to the provincial Ministry of Advanced Education” [17].

Perspectives from China show a lack of understanding of academic integrity and lack of adherence to practices of academic integrity. Until 2000, there was just one Chinese academic research article on academic integrity and this figure has risen to 1074 by 2013 [18] (p. 101). By 2013, the majority of articles focused on academic integrity from the angle of academic misconduct [18]. Since 2009, the Ministry of Education in China has issued six policies on academic misconduct and there is evidence denoting that a considerable number of persons have been penalised for academic misconduct between 1999 and 2010 [18]. Apart from that, Chinese higher education institutions are taking institutional approaches to address challenges related to academic integrity. Peking University established its own policies in 2001 to combat academic misconduct and it was based on the American FFP formula which stands for “falsification, fabrication, and plagiarism” [18].

In Sri Lanka, universities are under strict observation of a powerful overseeing body, the University Grants Commission (UGC). What is significant about the UGC in Sri Lanka is that both state universities and certain private universities come under the purview of this powerful body. Even private universities that are established in Sri Lanka seek recognition and endorsement from the UGC as students do not

enrol in private universities if universities are not recognised by the UGC. Therefore, academic integrity policy and practice do not show much difference among Sri Lankan universities.

1.3. Overview of Assessment Security

According to CRADLE (Centre for Research in Assessment and Digital Learning) [19], academic integrity is meant to equip students with the competences and values necessary to engage in ethical scholarship while assessment security focuses on securing assessment against cheating, and on detecting any cheating that may have occurred. CRADLE also states that both academic integrity and assessment security are necessary to ensure that students who have completed their university education have met the required learning outcomes. Threats to assessment security can be mitigated by designing assessment methods that are resilient to challenges of contract cheating. Such methods increase learning productivity while developing essential skills in students.

A basic principle in assessment design is to ensure that assessments enable students to demonstrate their learning practically. However, assessment methods other than benchmark examinations and viva have the risk of contract cheating. Even though formal written examinations may reduce contract cheating, written examinations do not accommodate assessing all types of learning [20].

Across universities in the higher education sector, assessment security is maintained through adherence to deadlines. In the past, deadlines were set with the view that limiting or controlling the time available to complete assignments will prevent cheating. However, there is increasing evidence to say that deadlines no longer prevent students from cheating. “Essay mills” and freelancers or “ghost-writers” offer their service for high-stake assignments within a short duration for a higher charge. Another means of maintaining assessment security is the use of checkpoints. Education providers can reduce the risk of cheating by setting up “checkpoints” for detection. With ‘checkpoints’ or advanced drafts, academics are able to verify if students actually engage in their academic work. It is helpful in tracking research findings and discussions, conducting online testing and evaluating group work. Many universities employ vivas to combat academic misconduct and to maintain assessment security. Apart from that, institutions have institutional approaches to maintaining assessment security. They could be annual reviews in universities, aiming to improve the learning experience for all involved, including students, staff, and programme leaders. This further aids programme teams in programme revisions as part of the review process. The central mission of such review is to use both quantitative and qualitative data provided by students and staff to shape and define assessment and feedback strategy for the future [21]. Not many higher education providers worldwide were prepared for a crisis like the COVID-19 pandemic. Until the COVID-19 outbreak, many universities still used conventional classrooms/contact education that required the physical presence of students and universities still maintained strict attendance policies. Due to the conventional mode of delivery, many universities were not fully prepared to facilitate online delivery and assessment. For instance, South Asia does not have prior experience in coping with a pandemic. Countries that have prior experience in coping with pandemics and natural disasters have better disaster preparedness and disaster management. Countries in South East Asia, Canada, New Zealand, United States and many universities in Europe have conveniently shifted to online delivery due to their disaster preparedness and contingency plans. However, South Asian universities are far behind in terms of adapting to remote online delivery. The need to develop online platforms, policy for online learning and teaching, rules and regulations is greatly felt at a time like this.

Eaton [17] elaborates on the contingency action plans of the University of Calgary and its resilience in the face of crisis. The floods that affected Calgary in 2013 have created a sense of disaster preparedness, and, due to this, Eaton believes that they “are in a unique position” now that they have already responded to a crisis which occurred during their Spring term that year. The University of Calgary’s approach to integrity seems to be people centered. Eaton mentions how the University’s Provost encouraged the entire University to ‘start from a place of trust’. Aligning with the institutional mandate of prioritising people, as articulated in the Academic Plan, the University emphasised prioritising

health and safety. Bearing these principles in mind, the Taylor Institute for Teaching and Learning provided support for the university's smooth transitioning to remote learning. Two websites were developed to provide direction and guidance to students and faculty (respectively): The Learning Continuity website and Teaching Continuity. In the meantime, a separate website was developed for Academic Integrity in Online Learning, linking it to additional resources to help staff. In addition, a series of free virtual training sessions are offered on a weekly basis since March 2020 benefitting the faculty, TAs and members of the public [17].

This paper examines the changing landscape of higher education by reviewing assessment security in the digital domain and critically evaluating practices from different universities in safeguarding academic integrity and challenges associated. The significance of this study is that it attempts to present an overarching picture of academic integrity in digital domain in the COVID-19 context. In this manuscript, the authors review information from selected countries and higher educational institutes. The reason for being selective with the countries and institutions is convenience and accessibility to information. Information on the impact of coronavirus on education and academic integrity is scant. Therefore, this paper reviews information that is readily available on the internet as well as publications available through a range of subject specific databases, such as Web of Science and ScienceDirect. Data collection for the study employs documentary research from multiple sources of data. The documents reviewed in this study are books, websites of selected universities, newspapers and national and institutional policy documents on academic integrity.

2. Assessment Arrangements under COVID-19

2.1. Assessment Practices—Pre-Covid-19

Universities, in general, use formative assessment and summative assessment for different purposes [21]. Formative assessment monitors student learning while providing ongoing feedback to staff and students. This form of assessment is largely for students' learning through understanding their strengths, weaknesses and improving their skills. Faculties can use formative assessment to gather information about student weaknesses in order to provide further support for their development. They can be tutor-led, peer or self-assessment. Most importantly, formative assessments are low-stake assessments and this assessment does not contribute to the final grade/mark they receive for the course. Some examples of formative assessments are peer evaluation, in-class worksheets, pop quizzes, presentations, journals, and diagnostic tests. On the other hand, summative assessment evaluates student learning or meeting learning outcomes at the end of an instructional unit by comparing it against some standard or benchmark. Summative assessments often have high stakes as they contribute to the final grade of a student. It provides little feedback to help them improve before the conclusion of the program.

In the UK, the Quality Assurance Agency (QAA) for Higher Education provides guidelines and guiding principles to higher education providers through its Quality Code for Higher Education [20]. It is mandatory that all higher education providers in all parts of the UK follow the UK Quality Code for Higher Education. It is generally referred to as the Quality Code and it consists of Expectations, Core Practices and Common Practices advisable to higher education providers. 'Core Practices' are mandatory for all part of the UK while 'Common Practices' are only mandatory in Scotland, Wales and Northern Ireland. In the UK, in terms of maintaining educational standards, it is a core practice that education providers use external expertise, assessment and classification processes that are reliable, fair and transparent [20]. The UK has a range of assessment practices in the pre-COVID-19 context. Some of them are, time-constrained unseen exams, in-class presentations, portfolios, viva voce exams, posters, lab work, Objective Structured Clinical Examinations (OSCEs), and theatre, drama and performance [21,22].

In Nigeria, summative assessment is the predominant form of student assessment [23] (p. 156). Since summative assessment carries a considerable score, more attention is given to summative

assessment. Due to this reason, academic misconduct that is associated with formative assessment are less likely in Nigeria. Academic misconduct in Nigeria is largely cheating in examinations and in-class tests where students can be found “helping each other”. There are reported cases where Nigerian academic staff use pop quizzes as a form of summative assessment. Other forms of summative assessments allowed in Nigerian educational institutions are “controlled examination, open-book examination, essay or report, term paper, critical analysis, portfolio, dissertation, oral presentation, skill performance, and attendance” [23]. Not all these assessment types are used in most Nigerian universities. Therefore, the predominant use of one form of assessment has created a notion of integrity in relation to the most used type of assessment. Due to this, students may overlook the requirement of academic integrity when it comes to other forms of assessment [23].

Institutions across the higher education sector use diverse innovative assessment practices. One innovative assessment method practiced by the Department of Psychology of the MMU is using student conferences as assessment [21]. The Department has used this mode of assessment for the past 12 years as a space for Year 3 students to present their final projects. It resembles any other national conference with keynote speakers and “the presentation is assessed and moderated by three members of staff” [21]. Certain universities use detailed summative feedback by breaking down the marking criteria and marking grid into sections with very detailed band descriptions. Students have access to the marking criteria via Moodle and it gives them the chance to identify their areas of strength and areas for improvement. One of the assessments on Engineering programmes includes presenting to industry panellists where they receive feedback from professionals as well as academics. Students in Manufacturing postgraduate course, work with life clients on authentic tasks. Students are assessed on “a group report, a poster, and gives a presentation to a large group of academics, students and industry specialists” [21]. The group presentation carries 70% of the grade, while 30% is allocated to individual performance. Furthermore, postgraduate students are assessed on authentic work with real companies to which they provide live consultancy. Students provide written reports to companies and present the findings and recommendations verbally which is assessed by the department [21]. Apart from that, the University of Glasgow piloted the use of social media to encourage active participation in lectures and seminars. Twitter is used as a form of assessment in order to encourage active participation in lectures and seminars; the staff at the University of Glasgow piloted the use of social media as a form of assessing students’ skills [21].

The University of Greenwich in the UK uses multiple innovative assessment practices as a substitute for traditional written essays. For example, one assessment practice employed in the Public Relations study programme is designing assessments in which students are required to use technology when they address past briefs from clients. Secondly, the Department of Law holds a Virtual Law Clinic which is a collaboration of Law Department staff. This Virtual Law Clinic uses technology to bridge the gap between “academic and professional practice by involving students, staff and professional bodies into addressing legal queries from the public” [21]. Students are assessed on the legal advice they provide to the clients during the Virtual Law Clinic [21]. History students are assessed on video presentations that have come to replace traditional essay writing. Another innovative assessment practice is to employ a project for peer guidance via podcasts, in which Level 5 students created audio assessment guides for junior students. In addition to that, creating podcasts are utilized as a form of assessment and academic staff assess students based on a podcast submission [21]. Audio-visual feedback is another assessment practice at the University of Greenwich. For example, Adobe Connect is used by academic staff to provide feedback to MSc students [21].

2.2. Take-Home Exams under Current COVID-19 Condition

Many universities have resorted to alternative forms of student assessment during the COVID-19 pandemic. Among the types of practical assessments that may be moved to online assessment are: laboratory-based practicals (e.g., chemistry, physics, health sciences); performance-based assessments (e.g., fine arts, dance); physical artefact development (e.g., engineering, fine arts); psychomotor skills

(e.g., physiotherapy, nursing and other health professions); interpersonal skills (e.g., medicine and other health professional consultation skills); language skills (vivas). The suggested alternatives for these practical assessments include video-based uploads using Cloud technology; online simulation-based tasks; submitting online portfolio; real-time observed practicals/vivas via Zoom or Blackboard Collaborate [24].

Take-home exams are one such alternative mode of assessment where the original assessment cannot be completed in the usual way. Formal examinations that were scheduled to take place as face-to-face examinations have now taken the form of take-home online examinations. These exams can be completed by students in the comfort of their homes with access to subject notes, texts and resources. This does not mean that this is not time-bound. Take-home exams are time-bound and due to that reason, they also come under time-constrained assessments. However, instead of writing during a set time period (for example, 2-h or 3-h exam), students have a window period of about few days and up to a week to submit their answers. Take-home exams generally contain one or more questions that require essay or long-form responses. Most importantly, take-home exams require citing examples and references. As take-home exams are not under the same time pressure as a sit-down exam, the criteria for grading take-home exams include argumentation, organization, evidence, citation, and language fluency. In terms of adaptability, take-home exams are considered relatively easy to convert to online environments as they do not need change. Essay questions and problems designed for examinations can be conveniently translated to a take-home, open-book exam with slight modifications depending on expected learning outcomes [25]. It is also important that tasks are reconsidered and revised to make sure that students can still produce their writings with the limited resources available to them.

In the UK, certain universities make examination papers available to students through virtual learning environments [25]. Students are then required to download the examination paper, complete the examination on the student's own computer and submit their completed examination paper through Turnitin. The time duration of the take-home examination is the same as the conventional exams taken in person. Furthermore, in most cases, the take-home examination is given a 48-h window within which students can complete the take-home examination and submit it. This 48-h window is given to resolve technical issues, glitches or allow students to grapple with unexpected situations if they arise. It also facilitates students with a Learning Support Plan who have Special Arrangements for examinations such as additional time, rest breaks, individual exam room, or the use of a computer. What is noteworthy is that this 48-h window provides an equitable opportunity for students with physical and mental disabilities even in this difficult time [25].

2.3. Time Constrained Assessments (TCAs)

Deakin University in Australia uses time-constrained assessments [26], even though different Australian universities seem to practice different approaches to assessment under COVID-19. For instance, Monash University offers the option of withdrawing from a course unit without having to face an academic penalty [27]. The University of Bristol in the UK also allows alternatives for time-constrained unseen exams, and these alternatives include open-book exams, Multiple-Choice Questions (MCQs) or free-text questions [22]. Open-book exams are somewhat similar to take-home exams. However, the distinction between these two is that open-book exams are similar to traditional campus-based exams: They are more restrictive in terms of time and space, and citations are not required unlike in take-home exams. Students are generally required to log on to the respective online examination system remotely, download the exam paper, answer the questions and upload the answer script within a more constricted time window than what is given for take-home exams. Certain universities transform traditional exam papers to computerized papers where students are required to take the test by remaining on their personal computers for a specified time period (for example, 2 h or 3 h).

In Sri Lanka, social interaction among students is high and it is further heightened on social media platforms such as Facebook, WhatsApp and Viber groups. Therefore, there is a relatively higher chance

of students communicating with other students. Academics in Sri Lanka have found that it creates a higher chance of knowledge sharing among students, making it difficult to assess students.

2.4. Pass/Fail Option Instead of Conventional Exams

Oxford University announced that the “majority of examinations for first year undergraduates will be cancelled, and students will be deemed to have passed” [28]. This arrangement excludes Law and Medicine students since assessments will be rearranged for professional qualification reasons. For second- and third-year (non-finalist) undergraduates, and first-year MPhils, examinations will be postponed to the next academic year. Third-year undergraduate exams are given an exception since these exams are taken by a mix of continuing and leaving students. For that reason, exams will be continued. Moreover, final-year undergraduates and taught postgraduate exams in Trinity term 2020 will be replaced with alternative forms of assessment such as open-book versions of papers and longer pieces of work completed over several days [28]. Oxford’s reason for this approach is its aim of supporting students with various circumstances, whilst mitigating the impact of the pandemic to the best of their ability. Oxford strives “to develop a workable solution—to reduce complexity, minimise disruption, and provide an equitable approach for all candidates” [28].

Similarly, a considerable number of universities worldwide follow No-Detriment policies as a safety net for students who fail to perform their best in this unprecedented time [29–31]. No-Detriment policies have enabled students to freeze their grades and not be negatively affected by the challenging circumstances they have to work in. In the UK, No Detriment policies are considered the popular “blanket” that helps students retain their grades for exams and periodical assessment; this blanket allows students to improve on their grades and not fall below its current level. A total of 23 universities out of 24 Russell Group Universities in the UK have adopted the policy [31]. However, there are slight changes in the implementation of this policy. For instance, in the University of Oxford, this blanket policy applies only to students with a current average of above 50 per cent [31]. Some universities have completely turned down student requests and petitions calling for No-Detriment policies. These universities maintain that No-Detriment policies compromise academic integrity and undermine education standards of universities [31].

In terms of assessment strategy, certain universities show willingness to have blanket policies in place. For instance, during the COVID-19 pandemic, the University of Calgary shows a willingness to compromise [17]. According to Eaton, on March 22nd the University proposed to implement an alternative system for final grades for the Winter 2020 term, which gave students “the option of their usual letter grades or Credit/Fail” [17]. On 22 April, the University announced: “a return to the regular grading system for the Spring 2020 semester onwards, so as not to affect students’ grade point average for an extended period of time” [17].

3. Challenges to Safeguarding Assessment Security

This section makes extensive reference to the UK Quality Code for Higher Education, which presents a set of guiding principles for education providers to encourage assessment security. The reason for making reference to the UK Quality Code extensively is due to its clarity and overarching nature—most countries do not have such overarching national level documents that provide guidance to HE institutes. In the UK Quality Code, Guiding Principle 10 encourages assessment security and highlights the importance of ensuring integrity through all aspects of the assessment process [20]. In the UK, assessment security is understood as a bilateral scenario. On the one hand, the UK Quality Code for Higher Education is meant to protect students against unfair assessment activities, unfair assessment criteria and unfair grading. On the other hand, it is meant to help academics abide by university academic integrity policies, maintain academic standards, and grapple with plagiarists, contract cheaters and other forms of academic misconduct. It could be understood as a two-way shield that protects both parties involved. The UK Quality Code identifies the following as potential risk areas in student assessment:

“transit of draft assessment questions/tasks between staff and between campuses and transit of materials to external examiners”

“invigilation of examinations”

“confirming the identity of students undertaking assessments, whether in an examination room or online, and when student work is submitted in person, online or through other means. Students’ marks and related information (such as extenuating circumstances applications) are held securely and disclosed only to those who need access and have a right to see it” [20].

What is noteworthy is that, the UK Quality Code encourages university lecturers to bear in mind the reflective question, “What measures do you have in place to ensure the security of your assessments?” as they design assessment activities, assessment criteria, benchmark criteria, and grading” [20]. Bearing this in mind, a question worth examining is what makes assessment security difficult to enforce.

3.1. Assessment Restrictions Are Harder to Enforce Remotely

According to the Irish Universities Association, there is a high probability for online students to cheat on assessments when compared to campus-based students. Students are highly likely to use the same opportunities to cheat on homework, take-home assignments, essays and group-work when they are under high pressure. Assessment restrictions such as invigilation of examinations, quizzes and presentations are highly impossible in remote online teaching. For example, in a remote online examination, students are able to refer to other sources and seek the support of a friend or a freelancer to answer the questions on time. If students take un-invigilated computerised online exams, it is a major challenge to student identity verification. Not verifying student identity leaves room for third parties to take the exam on behalf of students and this could result in a serious breach of examination regulations. A lack of online proctoring or invigilation leaves room for various modes of contract cheating. However, one-on-one invigilation is impossible in the present situation. One alternative mode of assessment is virtual invigilation, which is highly expensive [32].

Invigilation in the UK is known as “proctoring” in the US, which is why remote invigilation is also known as ‘online invigilation’, ‘online proctoring’ or ‘remote online proctoring’. TestReach [33] defines online invigilation as the experience of sitting an exam in a physical test centre or recreating an exam hall in an online environment. Unlike in conventional exams, where candidates travel to an exam venue to sit their exam, online invigilation facilitates exams from any location using their computer with internet connectivity. During the exam, the candidate is supervised live by an online supervisor over the web employing various communication and security technologies. It is the duty of the supervisor to authenticate the identity of the student to monitor the candidate throughout the exam to ensure that no cheating occurs. This process entails, (1) “pre-checks” to ensure the candidate’s technical environment is set to support a remote online exam, (2) “candidate authentication” to verify that the correct person has presented to the exam, (3) “securing the environment” to ensure that the candidate is in a secure environment with no resources that breach examination regulations, (4) candidate supervision to ensure there are no infringements of the rules, and (5) reporting, which means informing the examining body of the candidate’s behaviour during the exam [33].

3.2. Lack of Support to Students Due to Remote Delivery and Students’ Perception of Academic Integrity

Remote delivery has restricted student access to information and support. On the one hand, library services are not accessible to students worldwide and open-source journals, free digital libraries and resources are the only information materials available to students. While some students have free access or the ability to purchase academic papers online during the pandemic, there also exist students who cannot access or afford to purchase reading materials from internet sources. This results in a knowledge gap which could eventually lead students to engage in acts of academic misconduct. On the other hand, Information on academic integrity policy, rules, regulations, types of misconduct and information on how to overcome academic writing challenges are not readily available to students

during remote delivery. Therefore, students may consciously or unconsciously tend towards academic misconduct. A lack of support encompasses a lack of support to students with special needs as well. In virtual classrooms, students are compelled to become comfortable with a virtual environment which may not even cater to their individual learning styles. For instance, kinaesthetic learners may be placed at a disadvantage since remote delivery does not cater to kinesthetic learners. Similarly, visual learners may not benefit from remote learning that relies heavily on oral lectures. In such a backdrop, academic misconduct may happen.

3.3. Technological Issues (As a Result of Remote Delivery)

Assessment restrictions are difficult to be imposed as students are challenged by various technological issues. For instance, online delivery may get affected by even the most mundane issues, such as bad weather in different locations from which students access online teaching platforms. Students in low-income countries and middle-income countries do not have the infrastructure and resources to shift their delivery to online remote learning. In such contexts, a considerable number of students are excluded from remote learning, which is accessible to only a minority of students with resources and the means to fund themselves. Another issue is computer literacy or the lack of computer literacy in certain students. Online examinations and quizzes may be challenging for students who are challenged by technologies. Similarly, students with special needs may also be excluded due to this mode of learning. Technological issues also challenge the implementation of online time-constrained assessments and examinations and it is difficult to enforce assessment security in such a setting.

In countries such as Sri Lanka, poor infrastructure affects student learning. Students who do not have access to laptops and computers use Learning Management Systems (LMS) software on their mobile phones which places them at a disadvantage. Buying internet facilities and downloading content is also not affordable for many students. Due to these reasons, students are inclined to resort to acts of academic misconduct. In Sri Lankan universities, students who engage in remote online learning using smartphones are challenged as they submit their assignments and papers via LMS and Turnitin. Therefore, universities have given alternative modes of submission to students. Students are allowed to write on physical papers and upload photos of their answers on the LMS. However, this makes the use of text-matching software impossible, leaving a modest chance for students to commit acts of academic misconduct.

3.4. Contract Cheating

'Contract cheating' is when a student uses the help of a third party to complete their work and then submits it for grading as their own work [34]. These third-party essay writers can either be companies or individuals and they are generally known as 'essay mills'. Contract cheating is not permitted in higher education. Third-party essay writing personnel is contacted (but not limited to) using a website that promotes themselves or receives orders. 'Essay mills' often outsource the work once again to individual writers [34]. Even though these companies are often referred to as 'essay mills', their products can range from "essays to lab reports, reflective journals, dissertations, computer programming, film editing and other services" and their work range across many disciplines [34]. This contract cheating between a student and a third party may involve payment or other favours. Contract cheating is undetectable unless academic staff pays close attention to student in-class performance and assessment performance. To grapple with contract cheating, QAA suggests organisation-wide detection methods such as linguistic analysis tools to complement text-matching software [34] (p. 4). Contract cheating does not always involve monetary exchanges; it has other facets, such as sharing work that is subsequently submitted as students' original work which then constitutes another academic misconduct—'collusion'. Whether third-party essay writing involves monetary exchanges or not, it is a threat to assessment integrity. Assessment integrity is founded on fair, equitable and reliable processes of assessment in order to assess the extent to which students have achieved the learning outcomes desired from a

particular program. As students who engage in contract cheating are assessed for the work done by a third party, it is a clear threat to maintaining standards in higher educational institutions.

Examining assessment security during the COVID-19 period calls for a comparative study of the pre- and post-COVID-19 periods. As evident from research reviewed above, assessment security is difficult to enforce even in on-campus study environments. Considering the challenges to assessment security even in on-campus study programmes, enforcing assessment security in a remote study environment is definitely much more challenging. Remote teaching and learning is carried out globally with minimal resources such as limited learning support, teaching aids, library resources and monitoring. Since on-campus examinations, mid-semester tests, pop quizzes and presentations are impossible to be administered remotely, alternative modes of take-home assessments are employed by academics. Some of these alternative modes of assessment are vulnerable to many forms of academic misconduct, which makes it easier for students to cheat on homework, take-home assignments, essays, remote-online exams/quizzes and group-work. Many forms of contract cheating also go unnoticed due to loopholes in alternative remote assessment methods. Therefore, fairness in assessment during remote delivery and remote assessment cannot be guaranteed due to difficulties in monitoring students.

4. Challenges to Safeguarding Academic Integrity

Educational Developers from Victoria University recognise contract cheating as, “the real ongoing challenge. Contract cheating websites provide the option of doing the assignment in 2–3 h, the student will pay more but there is no detection using the existing tools. They are sophisticated contract cheating services” [14]. In the present global context, new challenges have arisen in the remote learning landscape. According to another academic, “instructors who try to prevent contract cheating by conducting in-class writing assignments, there may be new challenges in this remote learning landscape” [14]. For instance, in-class examinations and assignments are aided by freelancers on platforms such as Fiverr.com. This too is a form of contract cheating. Virtual test takers cannot be invigilated strictly just as students who are physically present in a physical classroom, and this has increased the risk of freelancers aiding online real-time tests [14].

In the UK, the UK Quality Code for Higher Education, Academic integrity is understood as a mutual commitment. Education providers are encouraged “to operate effective processes for promoting academic integrity and identifying, investigating and responding to unacceptable academic practice. Providers implement effective measures to encourage students to develop and internalise academic values and good academic practice” [20]. Practical steps towards academic integrity include (1) avoiding the recycling of work and assessments too regularly, (2) training invigilators appropriately, (3) having good exam room etiquette and procedures in place, as well as appropriate security measures for exam questions and (4) making everyone aware of the consequences of cheating. The UK Quality Code also stresses the importance of ensuring that students do not obtain credit or awards through any form of unacceptable academic practice relating to assessment (including plagiarism, cheating in exams, contract cheating, collusion and impersonation) [20]. Providers in the UK implement clear processes through which unacceptable academic practice can be reported by anyone with relevant knowledge and investigated objectively and fairly. Furthermore, it also encourages proportionate, consistent and equitable penalties for proven cases of unacceptable academic practice. Most importantly, the UK Quality Code for Higher Education recommends staff to reflect on the question, “How do you ensure that you operate effective processes for promoting academic integrity and identifying, investigating and responding to academic misconduct?” [20].

With the COVID-19 pandemic and the shift to online delivery of study programmes, academic integrity has moved into uncharted territory. Academic integrity is now mainly challenged due to the wide availability of contract cheating services and the increasing pressure on students to perform even during the COVID-19 pandemic. With institutional systems in place for detecting plagiarism, there is faint hope that the recycling of work and intellectual property theft may have been prevented to a considerable extent despite the COVID-19 pandemic. However, the preparedness of academic staff

to grapple with other forms of academic misconduct is still very little. Even though academic staff in most countries receive considerable training for proper invigilation activities, such training has proved pointless in the face of the COVID-19 pandemic since on-campus examinations are out of the equation. Except in high-income countries, academic staff worldwide had very little preparedness for assessing students through alternative modes of assessments carried out remotely. Another factor that affects remote assessments is the discipline-specific nature of assessment design. Even though many academic programmes employed diverse modes of assessment for evaluating students in the pre-COVID-19 period, certain study programmes in the science, technology, engineering and mathematics (STEM) fields cannot shift to a remote delivery with entirely different alternative modes of assessment. For example, even though take-home exams, quizzes, papers and presentations are widely employed in the Social Sciences and Humanities, it is impractical for STEM fields to transform their assessment practices to take-home exams, quizzes and papers entirely. Most study programmes in the STEM fields rely on practical hands-on field experience and empirical knowledge. Therefore, students from STEM fields are largely affected by this situation due to the restricted study conditions they face. This situation has the same impact on students from research-based study programmes. For instance, research-based Masters and PhD programmes are greatly affected by students' lack of access to continuing research work. In this challenging setting, falsification and fabrication of data, plagiarism, and contract cheating are anticipated.

4.1. Policing Academic Integrity and Associated Challenges

Detecting academic misconduct and policing academic integrity entail a number of challenges and complexities. Firstly, academic staff also lacks consensus about what constitutes academic misconduct, which results in certain acts of academic misconduct going undetected. Secondly, detecting academic misconduct is extremely difficult unless close individual attention is given to student performance and assignments. Thirdly, complexities arise in enacting academic integrity policies/laws as procedures are not clear and pronounced. These already existing challenges are heightened in the COVID-19 period where faculty operations are restricted or largely happen remotely. In virtual study environments, individual assessment of student performance is extremely challenging. This poses a challenge to academic staff in distinguishing A-grade students from students who engage in academic misconducts. Hence, detecting academic misconducts during remote online delivery and remote assessments is challenging and what is even more challenging is processing cases of academic misconduct with limited faculty operations.

Some academic staff believe that existing policy for minor acts of dishonesty is disproportional to the offence or the penalties are not calibrated. Often, academic staff tend to ignore acts of academic misconduct even when they are detected, because the procedure is not clear to them or it is overcomplicated or time consuming. Since teaching staff has a range of professional commitments, such as teaching, assessing, grading and producing new research, academic misconduct goes unnoticed due to the workload. Morris and Carroll [35] explain how cases of academic misconduct have been overlooked in the US as they were viewed as "minor" offences and that they would eventually be penalised by someone else. Perspectives from Canada show similar behaviour on the part of academics due to the lack of consistent guidelines and lack of support for implementing academic integrity policy [35]. In this backdrop, there is no guarantee that academic misconducts done by students during the COVID-19 period will not be overlooked. If academic misconducts had gone unnoticed in on-campus study programmes, there is a much greater possibility for academic misconducts to go unnoticed during online remote delivery and assessment.

Considering the facts enumerated in previous research, it is evident that academic integrity policy is in place in every higher educational institution even though they are not consistently used. The reason for the poor implementation of academic integrity policy is that there is no proper system in place with officers specially dedicated to execute such a policy. In most universities, academic staff is expected to perform the role of guardians of academic integrity. Even though the support of academic

staff is essential in detecting acts of academic misconduct, there exists the need for an independent body of officers to implement academic integrity policy further from the point of detection. Trained specialist officers are necessary in shaping institutional academic integrity policy, upholding academic integrity policy and practice, training and mentoring academic staff concerning such issues [35] (p. 456).

Morris and Carroll maintain that addressing gaps in academic integrity is not a one-off event but rather a continuous process that needs to be sustained through regular initiatives [35]. Changing technology, including text-matching software, changing online test-delivery, invigilation strategy and assessment strategy needs careful scrutiny. Furthermore, effective monitoring and policy review is also integral to implementing academic integrity policy. However, the challenge is that institutional solutions consume time and require resources. These resources include human resources as well. As cited by Morris and Carroll, Sutherland-Smith [35] explains the risk of “relying on executive or senior management initiatives” (p. 458) in pushing improvements in “academic integrity associated policy documentation”. The risk is that new policy developed and documented by a third party may not be reasonable to the relevant academic staff who are responsible for detecting academic misconduct and implementing academic integrity policy. Another challenge is the time-consuming nature of academic policy development, implementation, monitoring, reporting and reviewing. Strong responses that require vigilance, severe punishments and short-term campaigns are less effective than carefully and meticulously developed long-term project plans. Long-term projects are gradual and time-consuming, yet they focus on a more holistic approach than short-term plans [35] (p. 458).

The COVID-19 situation calls for a revisal of academic integrity associated policy documentation to accommodate regulations regarding online delivery and assessment practices. Yet, the compilation of academic integrity policy documentations alone does not guarantee academic integrity as it needs constant vigilance, supervision, and a system of punishments in place.

4.2. Financial and Social Pressure on Academics and Universities

Despite strict academic integrity policy frameworks that are in place in the higher education sector, many factors challenge the implementation of these policies. For example, universities across the globe are competing with one another to improve their world university rankings. In this race among universities, there is an alarming issue: grade inflation. Foster [36] (p. 309) discusses grade inflation extensively and explains the distinction between “earned grades” and “bona fide grade inflation”. ‘Bona fide’ grade inflation means the awarding of a higher grade due to the decline of grading standards. Grade inflation occurs when grades do not rise commensurately with the quality of student work. This could happen due to many reasons. Competition among universities, commercialisation of education, and competition for more student enrolment and funding. Private universities that operate in foreign countries remotely from their main institutions are vulnerable to grade inflation since it directly increases their student enrolment and income. Academic staff who work in such private universities are unable to maintain academic integrity due to financial and institutional pressure. However, just as private universities, publicly funded universities are also vulnerable to the issue of grade inflation due to the public rhetoric that public universities should increase access and fairness [36] (p. 309). In middle and/or low-income countries, grade inflation can occur simply out of pity for the less privileged students who are grappling economic hardships.

In the COVID-19 context, both students and universities are under financial pressure. For instance, self-funded students who are unable to work their part-time jobs faced the financial pressure more than scholarship-funded students. Similarly, many universities worldwide faced financial crises due to the less number of international student enrollments during the COVID-19 crisis. Students who are burdened financially are ambitious to obtain good grades for their study programmes, making them resort to academic misconduct. On the other hand, universities and faculties burdened with limited student enrollments tend to overlook issues such as academic misconduct.

4.3. Discipline-Specific Nature of Academic Integrity

Defining and understanding academic integrity is complex since what constitutes 'academic misconduct' is diverse across disciplines. Bretag [37] (p. 673) notes that Wilhoit called for academics in every field to define plagiarism from their discipline's perspective, the reason being that what constitutes plagiarism in the sciences is very different from that of the music field. Furthermore, Bretag [37] (p. 678) notes that Lampert calls for collaboration between librarians and faculty, and argues that it is important to develop "effective ways to capture student attention about required citation styles, the ethics of information in various disciplines, and assess [students'] understanding of these concepts". Stenmark and Winn [38] (p. 678) maintain that research on ethics in the Humanities is being largely ignored as prominence is given to ethics in business and science. He then calls for extending knowledge of ethical issues into the Humanities domain. Furthermore, Stenmark and Winn state that, due to the highly creative nature of the Humanities, academics in these fields are much concerned about protecting their intellectual property and the information they collect [38] (p. 690). This is all the more reason why it is important to delineate academic integrity and ethics in the Humanities too.

James [39] (p. 696), writing extensively on academic integrity in legal education explains that a "breach of the rules by a law student is considered to be particularly serious" due to the importance of integrity in the legal profession. Academic dishonesty or any breach of the rules by a law student may demand disclosure when the student applies to become a lawyer [39] (p. 696). Similarly, the rigorous admission requirements to the legal profession urge law students to comply with academic integrity policies. James [39] (p. 696) citing Sheldon and Krieger states that law students have a higher tendency to cheat and engage in academic malpractices due to extrinsic values placed on "prestige of winning medals", "academic competitions", and the potential employment opportunities with corporate law firms. James extensively discusses the challenges faced by legal educators in striking a balance between academic excellence, and academic integrity and ethical legal practice.

In the larger world, academic integrity upholds best practice in research and writing. While plagiarism constitutes a breach of academic integrity, it happens outside of academia too. For instance, breaches of copyright and other forms of intellectual property cases also constitute plagiarism. However, according to James [39] (p. 702), in the legal education the system of rules for referencing and acknowledging the work of others are different from the rules outside the academic domain. James states that "academic misconduct" ceases to apply after the graduation of a law student. In simple terms, the "use and re-use of precedent documents, forms, and paragraphs" is common and almost routine in legal practices whereas "collaboration in drafting documents" is considered collusion and a breach of the rules in academic discourse [39] (p. 702).

In Economics and Business Studies, students enrolled in business programmes seem to engage in academic misconduct relatively more than in other disciplines. Citing Bretag, Lofstrom [40] (p. 717) writes that Business attracts international students who are often perceived as academically dishonest due to their unawareness or unfamiliarity with Western conventions of referencing. International students more often than not struggle with the English language and may require induction and successful integration to their new learning environment.

Research shows that in sociology and social work, academic misconduct is considerably lower than in other disciplines. According to Collins and Amodeo, this may be because these programmes are intrinsically grounded in values and ethics and in which formal codes of ethics are applied and academic staff often pays strict attention to student misconduct or integrity breaches [40] (p. 718). Lofstrom citing Butterfield states that, similar to psychology students, sociology and social work students may be frequently exposed to moral content in their disciplines [40]. In these disciplines, academic integrity is mostly framed in terms of the very lack of it. In simple terms, academic integrity is understood as opposed to academic misconduct such as misappropriating others' work as one's own, inaccurate or misleading referencing, data fabrication and manipulation, concealing information when disclosure is essential, or conducting research without ethical standards and practice. Defining academic integrity in the STEM (science, technology, engineering and mathematics) fields is also based on the very absence

of academic integrity. For instance, citing Korenman et al., Gilmore et al. state that scientists funded by the National Science Foundation identified, in a survey, fabrication, falsification (in other words, cheating) and plagiarism as the most serious forms of unethical scientific practice [41] (p. 731).

5. Understanding Why Students Take Shortcuts

Despite the increasing efforts of academics, researchers and university administration in grappling with academic misconduct, it is important that we understand why students tend to engage in academic misconduct. Students who are well aware that academic misconduct can result in serious repercussions still choose to do it for many reasons. Even though students have many reasons to engage in academic misconduct, it is also worth exploring why students find it difficult to perform while abiding by academic regulations. Research shows that one reason for increasing acts of academic dishonesty has more to do with academic staff who do not engage in curriculum and assessment design that mitigate academic misconduct/dishonesty. A lack of education training is argued to be one cause for this as educationists/educators do not receive proper training related to pedagogical literature, and teaching and learning pedagogy.

5.1. Pressure for Performance

Among the various factors that motivate students to cheat, the increasing pressure on modern students is attention worthy. Students are under pressure due to the competitiveness in the job market. At the same time, pressure for performance is influenced by massification and commercialisation of higher education. As large numbers of universities compete with one another to achieve excellence, universities also experience pressure to perform and excel in academics and research. In such a backdrop, very often quantity overshadows quality.

An average student in a university has to compete with the peers offering the same courses in the same university. In the broader society, when it comes to competing for job prospects or scholarship opportunities, the same student has to compete with peers from other universities with the same or better qualification. Pressured by these reasons, students may be under pressure for performance to maintain their standards. The high cost of higher education also drives students to cheat as failing exams and resubmitting a thesis may cost additional charges. Students who carry student loans throughout their undergraduate years are driven by the need to find employment and pay off their debts. Therefore, the need to cheat can be explained through the cost–benefit analysis framework as students assess their benefit since grades directly impact student employability. The commercialisation of education and high financial investments are causes for acts of academic misconduct [42].

5.2. Lack of Time, Motivation and Interest

Students in different regions are faced with diverse challenges and difficulties. For instance, the major problem in the US is the educational debts of students. The Federal Reserve Bank of New York Staff Reports show that only about 27% of 25-year-olds had student debt in 2004 and that in 2012, the proportion of 25-year-olds with student debt increased to about 43% [43] (p. 7). The delay in educational loan repayments constitutes a major issue in the US banking sector and economy. Many borrowers delay loan repayments due to “continuing education, deferrals, forbearance, and through income-based repayment plans” [43] (p. 7). In the US, student loan delinquency is the highest of debt production second to only credit card delinquency [43] (p. 10). In this context, students in the US are motivated to engage in acts of academic dishonesty due to the lack of time.

Brimble [42] highlights that lack of time to complete assessment is a common driver of dishonest behaviour. Apart from that, both higher education providers and employers seek students who excel both in academics and extracurricular activities that create work readiness and flexible personalities. With such high expectations and commitments, along with academic deadlines and exam schedules put too much pressure on students. This often leaves students underprepared, causing students to engage in academic misconduct.

In Sri Lanka, the majority of university students rely on parents' funding and they are under great pressure to finish their education in the due time. Working students are rare in Sri Lankan universities since part-time study options are not available. Undergraduate courses are full-time and they require 80% attendance/contact hours from students. Therefore, students are required to attend university on a daily basis. Since undergraduate students are full-time students, they are under immense financial pressure mostly due to two reasons: (1) students who are funded by parents feel obliged to perform their best in order to pass with excellent grades and (2) students from low-income families are obliged to balance their studies with part-time work while they support their families. Apart from financial pressure, students in Sri Lanka are pressured by immediate family and friends who constantly ask about student grades and performance even at university level. Due to these kinds of pressure, students resort to acts of academic misconduct.

5.3. Lack of Understanding about Plagiarism

Pecorari [44] (p. 357) writes that there is only a thin line between academic integrity and academic literacy. A student who has poor academic literacy may easily be misconstrued as a dishonest student. Similarly, Ken Tann maintains that plagiarism is caused by a lack of familiarity with plagiarism in general and also due to a "lack of familiarity with plagiarism software" [14]. According to Tann's personal experience, students do not intend to plagiarise but they are very often unaware of referencing if they are from a different culture [14]. This opens up the discourse on inexperienced writers using a second language in academia and its pitfalls which the authors do not attempt to address in this paper.

5.4. Cultural Issues/Background

Diverse cultural backgrounds of students are also a root cause for academic malpractice. To begin with, academic integrity does not have a universal definition nor consensus on what constitutes academic dishonesty. Higher educational providers across the same country may understand academic integrity in diverse ways. Moreover, academic integrity policies and institutional policy differ from one higher education provider to another. When higher education providers across the same country understand academic integrity in diverse ways, it is not possible to have a universal model or policy on academic integrity that cuts across different cultures. Due to this diversity of academic environments and cultures, certain scholars maintain that academic writing is culturally determined.

An interesting observation from the Australian higher education sector is that many international students in Australia show difficulties in acknowledging and citing outside sources according to Western academic conventions. Ballard and Clanchy [13] first identified that the majority of these students are Chinese students [13] (p. 24). Scollon [13] maintained that the difficulties faced by the Chinese international students were due to their longstanding adherence to Chinese cultural rhetorical conventions that may have shaped their writing behaviour. Scollon [13] (p. 24) further explains the impact cultural identity has on non-native speakers of English when they express their opinions in English. On the contrary, scholars such as Bloch and Chi, and Watkins and Biggs [13] (p. 24) challenged the idea that writing and thought is culturally determined. Nevertheless, this debate concludes with the general acceptance that an induction into the Australian academic environment is essential for international students to integrate into the Western academic sphere. Special training is encouraged for "essay writing and other writing genres, referencing, academic voice and register, and articulating opinions" [13].

The research works cited above are works published in the pre-COVID-19 context. They do not address the challenges to academic integrity in the COVID-19 context. However, understanding the state of academic integrity in the pre-COVID-19 context is crucial in understanding the nature of challenges that can be anticipated in the COVID-19 context. The same reasons that compelled students to engage in academic misconduct in the pre-COVID-19 period compel them to do acts of academic misconduct in the COVID-19 context. For instance, pressure for performance; a lack of time, motivation and interest; a lack of understanding about plagiarism; and cultural issues/background are

factors that also come into play in the context of the COVID-19. Students' pressure for performance is doubled in the COVID-19 context as they are burdened with financial, social as well as emotional pressure. Only a selected few universities employ No-Detriment policies and alternative systems of grading such as using 'pass' or 'fail' options instead of awarding grades for courses. Apart from academic pressure, some students in the COVID-19 context were pressured by immigration laws. For instance, international students holding F1 and M1 visas in US universities faced additional pressure due to the US Immigration and Customs Enforcement (ICE) guidelines that were announced on July 6th [45]. With the increasing pressure on students and the limited access to university resources, orientations and seminars, more acts of academic misconduct can be anticipated.

6. Encouraging Assessment Security and Academic Integrity

6.1. Assessment Security and Academic Integrity: Creating the Right Culture

Building on Cohen and Swift's "Spectrum of Prevention" and other tiered approaches, Jason Stephens provides an overarching framework with recommended practices for creating cultures that nurture academic integrity [46]. He proposed a three-tier model of intervention (see Figure 1) that is directed towards "school-wide education (SWE)", "context-specific prevention (SSP)" and "individual remediation (IR)" [46] (p. 996).

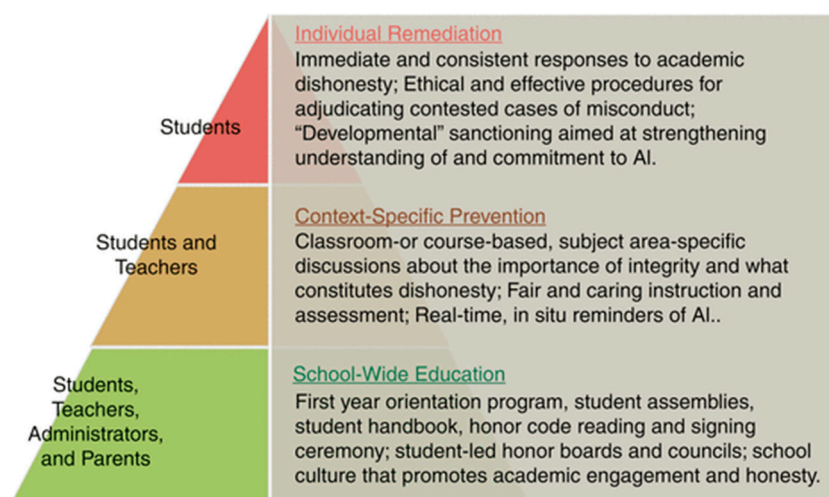


Figure 1. Creating cultures of integrity: a three-level model of intervention by Jason Stephens [46].

In this model, the biggest emphasis is placed on the base that stands for School-Wide Education as it is considered the primary level of intervention that happens on the first day at school/college or sooner. It is intended for all school/college or community members and aims at inculturation of academic norms, attitudes, and skills necessary for acting honestly in an academic culture. The implication of this is that the first step of securing academic integrity is by providing a thorough introduction to academic integrity and assessment security in school and college level. This introduction may take the form of an enrollment package, print materials, a student handbook and orientation where students learn the honour system in that institution. The secondary level of intervention is Context-Specific Intervention where programmes, staff and courses use context-specific reminders and designed tasks that reinforce the principles and practices introduced through level 1. Finally, the topmost level is Individual Remediation, which is an intervention procedure that is limited to only a few students who are suspected of academic misconduct. This level aims at processing suspected cases and "developmental sanctioning" which promotes building knowledge, values and skills related to academic integrity [46] (p. 996).

In terms of primary level of intervention in School-Wide Education, alternative modes are available even in the COVID-19 context. In the pre-COVID-19 context, some educational institutions provided

School-Wide Education on academic integrity through online tutorials or courses that are mandatory while some institutions use their own online programmes to promote academic integrity. The University of Auckland has made it compulsory to complete an online course on academic integrity by the end of the first semester. Institutions that do not create their own courses direct students to complete this compulsory education on a separate platform. One such platform is MOOC (Massive Open Online Course) created by FutureLearn, which requires students to complete a 4-week long course with an hour's commitment per week [46] (p. 1000). Apart from that, certain universities use a seminar approach to introducing academic integrity through philosophy and ethics programmes. For instance, Sri Lanka uses a foundation course on ethics, while Thailand [47,48] uses a seminar/online workshop approach to teaching research ethics. Such online courses and seminars on academic integrity and research ethics proved to be helpful in the COVID-19 context.

In the Context-specific Prevention level, intervention aims to reduce academic misconduct in a specific course or programme of study. It does not include all students in a batch, but all students participating in a course or programme of study. This process is a developmental intervention where students are encouraged to develop academic integrity practices with each milestone within their coursework. This involves "behavioural control or management techniques" as the classroom environment, and assessment design is manipulated to enable positive behaviour in students and to mitigate malpractice. One significant intervention strategy is providing multiple forms to students by randomising the order of questions and response choices. The paper or assessment form carries the same questions but their arrangement is different from one form to the other, reducing the possibility for students to exchange answers. Exam invigilation, proctoring and strategic seating arrangements are part of Context-Specific Prevention.

Meizlish [46] presents a typology of four-categories on "instructional best practices" related to academic integrity. The significance of this typology is its use of both behavioural and development approaches [46] (p. 1002). Among some of the developmental strategies proposed to lecturers are: (1) provide clear instructions on whose assistance and what kind of assistance is allowed for their homework, (2) demonstrate concerns on academic integrity and challenges, (3) teach/reinforce research and citation skills, (4) reiterate the institutional academic integrity policy and (5) sequence or stage high-stake assignments.

The third tier in the model is Individual Remediation, which deals with processing suspected cases. There are two types of sanctioning available at present: behavioural sanctioning and developmental sanctioning. Certain institutes that have traditional honour codes employ a "single sanction system" [46] (p. 1004) in processing academic misconduct and this falls under behavioural sanctioning. For instance, the University of Virginia and certain US military academies use expulsion as the only penalty, even though debates exist that such penalising is disproportional to the offence. Expulsion may be justifiable for major repeated offences but in minor offences, it is more apt to use developmental approaches that offer a chance for correction. What offers a chance for self-reflection and correction are remediation through education, which is why School-Wide Education and Context-Specific Prevention is necessary.

On the other hand, certain educational institutions have shifted from strict behavioural sanctioning and embarked on developmental sanctions for academic misconduct. Colby et al. write that the United States Air Force Academy (USAFA) which once employed the single sanction system shifted to adopting a developmental approach in the 1980s [46] (p. 1004). The expulsion was still prevalent for misconduct among older cadets but younger cadets identified for minor offences were made eligible for a 6-month probation and developmental activities such as "working with a mentor, writing a regular journal, undertaking special projects, and working to make other students aware of the importance of the honour code" [46] (p. 1004).

Considering Stephen's three-level model of intervention, the most effective intervention strategy in the COVID-19 context is Context-Specific Prevention as it is a developmental intervention aimed at developing academic integrity practices with each milestone within the coursework of students.

Individual Remediation which constitutes sanctioning is challenging in the COVID-19 context with university operations being restricted.

Another way in which academics uphold assessment security and academic integrity is by employing Bloom's Taxonomy of Educational Objectives in their teaching and learning practice. The initial framework introduced by Benjamin Bloom et al. consists of six major categories: Knowledge, Comprehension, Application, Analysis, Synthesis, and Evaluation [49]. This taxonomy is founded on knowledge, and the remaining five categories are presented as "skills and abilities". It works on the principle that knowledge is the necessary precondition for utilising "skills and abilities". This taxonomy was later revised in 2001 by a group of cognitive psychologists. However, Bloom's taxonomy is still used as a tool in pedagogy. It is found useful by many teachers as it helps them set learning objectives, and design teaching and assessment activities catering to those learning objectives. As learning objectives are established in a pedagogical interchange, learners and teachers have clarity on the purpose of that interchange. This provides a framework for teachers to design an assessment that covers only what they have covered in class. Designing assessments based on this taxonomy will provide protection for students against high-stake assessments that are outside of the curriculum. This, in turn, minimises the risk of acts of academic dishonesty as students are tested only on what they have been taught. Therefore, employing Bloom's taxonomy enables a high level of academic integrity as well as assessment security, and it is applicable to both the one-on-one and virtual delivery of study programmes and assessment.

Certain Sri Lankan universities use specific techniques to maintain assessment security. For instance, certain calculations in benchmark examinations in the sciences require students to use two to three digits in their university admission number. In such cases, each student is expected to have different answers which enable protection against cheating at examinations. Apart from that, university academic staff is vigilant of sudden increases in student grades or marks. A sudden increase in marks in an average or underperforming student in class gives the green light for lecturers to evaluate their performance discreetly. If such hints of suspicious activities are found, students are called for a viva to demonstrate their capacity. However, in the face of the COVID-19 pandemic, detection and sanctioning is both challenging. Conducting vivas is challenging in a remote online landscape and even students with excellent academic track records may also be challenged in such situations.

6.2. Talk with Students about the Dangers of Cheating

Academic integrity and assessment security can be reinforced through conversations with students. Apart from the risk to studentship, academic misconduct also poses personal threats to students. For instance, Yorke, Sefcik and Veeran-Colton examine how students are sometimes blackmailed by essay writing companies [19]. It is also important to discuss that risking expulsion from a university is not worth it considering the poor quality of assignments produced by "essay mills". A CRADLE study by Sutherland-Smith and Dullaghan found that most purchased assignments were not even of pass quality [19]. As faculties and academic staff engage in conversation with students regarding the dangers of cheating, the institutional academic policy is reiterated and reinforced [19].

7. Conclusions

Academic integrity policy and practices are not universal, and it is not practical to expect a universal model for academic integrity policy. Primary and secondary education in every country has country-specific approaches and examinations unless students sit for international qualifications such as Cambridge or Edexcel O/L and A/L, IGCSE and SATs. In a context where primary and secondary school education is diverse across the globe, expecting a universal model of higher education is unreasonable even though higher educational institutes insist on shared practices of academic integrity and assessment security. However, educational institutions are required to maintain standards and benchmarks for the purpose of ranking. Students are the stakeholder group that is most affected by academic integrity policy and management which, by default, places the main responsibility on them.

Even though, traditionally, it is believed that the main responsibility of maintaining academic integrity lies with students, there is a changing view that responsibility should be diffused as academic integrity needs to be a joint responsibility of the whole academic community [50] (p. 1014). Acts of academic misconduct go unnoticed if stakeholders or stakeholder groups are not clearly identified to actively engage in processing detected cases. Therefore, it is important to understand organisational structures for the viability of academic integrity management.

This paper examines the shift in the delivery of courses in higher educational institutes and elucidates the challenges associated with online delivery and assessment in the context of COVID-19. It is important to note how technology facilitating online delivery works otherwise to challenge academic integrity management. Diverse versions of exams and proctoring have enabled “low-tech” processes of behaviour control to academic integrity management. Similarly, modern technology has facilitated “high-tech” tools to detect academic misconduct. The use of plagiarism detection software and the open declaration of universities about the use of such software act both as behavioural control tools and as developmental tools [46] (1000). Despite the changing academic situation during the COVID-19 pandemic, academic integrity and assessment security are still indispensable in the higher education sector. However, there is still a lack of institutional provisions for academic integrity management in the context of COVID-19. Existing resources are inadequate to conduct high-stake assessments such as viva, thesis submissions and benchmark examinations.

For better management of academic integrity during online delivery and assessment during COVID-19, academic staff and faculties need to be equipped with procedural support that provides moral support for faculties. Resourcing and preparation are of the utmost importance in raising awareness and disseminating information on academic integrity policy, practices, expectations, disciplinary action and developmental tools to mitigate academic misconduct. Similarly, professional development is necessary for capacity building in academia to detect and process detected cases. Innovative assessment design and the designing of “low-stake” assessment tasks is another way of mitigating academic misconduct during remote online delivery. Designing assessment criteria and innovative assessment tasks help students understand the learning outcomes expected from them, leading them to adopt a mutually supportive approach towards assessment.

In the COVID-19 context, it is important to take into account the limited resources available to students and, therefore, establish attainable benchmarks. Since academic integrity policy cannot be compromised, the most plausible way of mitigating academic misconduct is setting attainable benchmarks that align with expected learning outcomes. Even though academic integrity policies are rigid and do not welcome regular changes, academic integrity is not a static concept. Practices that are considered acceptable academic conduct will undergo change in challenging times, as changing technologies come to challenge accepted practices.

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