# Contract cheating in higher education: Impacts on academic standards and quality

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## Article Info

## Abstract

Contract cheating has become increasingly an issue as universities adapt to online and hybrid teaching, learning, and assessments. Due to the COVID-19 pandemic, higher education institutions began to administer examinations more frequently online, and it led to the emergence of websites and commercial service providers who offer contract cheating services globally. In this paper, we examine the key elements that lead students to turn to contract cheating as well as the elements that deter the students from engaging in such unethical behaviour. We also investigate how assessment design can encourage authentic learning, although assessment design alone cannot eliminate contract cheating. The effects of contract cheating on academic standards and quality assurance are also examined. Mainly the study results show that the act of contract cheating is a result of interrelated internal and external factors in an individual. Although a number of measures, including authentic evaluations and digital tools, have been implemented to discourage students from cheating, no strategy is strong enough to control the issue permanently. Hence, academic integrity is still not assured, highlighting the necessity of a global movement to solve the problem.

## Introduction

Academic dishonesty – "cheating or plagiarism that gives a student an illegitimate advantage during an assignment or assessment" (Bleeker, 2008) – is a type of unaccepted behaviour by the academic community that has existed for millennia at every educational institution, from schools to higher education regardless of geographical, economic, or cultural boundaries. Research literature notices various forms of students outsourcing their academic work, and now it has become a globally growing issue in educational contexts. In general terms, types of outsourcing have been categorised into four groups: copying, plagiarism, collusion, and cheating (Guerrero-Dib et al., 2020). Whatever form is used, it leads students to be involved in violations of academic values and standards. The International Center for Academic Integrity (ICAI) defines academic integrity as the "commitment to secure six fundamental values, namely honesty, trust, fairness, respect, responsibility, and courage" (Fishman, 2014, p. 14). These values decide ethical academic behaviour that forms a community committed to learning and honestly exchanging ideas (Holden et al., 2021).

As Harper et al. (2019) mentioned, up to the late 1990s, the subcontracting of assessment was necessarily confined to hidden steps that were limited among peers. With the integration of technology into education to upgrade the quality, new opportunities for "e-cheating" (Holden et al., 2021) were created, increasing the students' tendency for plagiarism, ghost-writing, and contract cheating significantly. In this background, contract cheating emerged as a new challenge since it continued to develop into a large-scale commercial trade. Although the practice of students' paying for assessments began in the 1940s and 1950s, it is evolving at a fast pace (Lancaster, 2019) as education has become a commodity to be acquired (Harper et al., 2019).

Typically, contract cheating involves paid anonymous individuals or a company to complete academic work, and the term has been extensively used globally for more than ten years' time (Lancaster & Clarke, 2007). The phrase 'contract cheating' was first coined in 2006 by Clarke and Lancaster when a student pays someone else to complete their assessment (Rundle et al., 2019; Bretag et al., 2019a; Erguvan, 2021). Accordingly, contract cheating is the submission of work by a student, which contributes to their degree programme, in which they have paid someone unknown to complete their assessment. Eaton (2022) views contract cheating as not an act of individual students in a course making poor choices but as a business, whereas Williamson (2019) interprets it as a particularly insidious method of cheating because it is completely intentional and very challenging to discover. The term 'contract cheating' has now progressed to encompass several practices relating to subcontracting students' academic work to third parties (Bretag et al., 2018). In the recent definition put forward by Newton (2018), contract cheating results in a relationship between a student, their university, and a third party who supports completing the assessments for a fee.

In the act of plagiarism, students intentionally use others' perceptions without acknowledging the original writer. In addition, they lose the chance to learn, practice the skills required, and most importantly, the opportunity to receive valid feedback on their academic performances (Singh & Remenyi, 2016).

Contrarily, the terms ghostwriting: the practice of hiring a writer or writers for the purpose of academic writing (Singh & Remenyi, 2016), and contract cheating (Ali & Alhassan, 2021; Lines, 2016; Tauginien & Jurkeviius, 2017) are interchangeably used to refer to the act of academic cheating (Erguvan, 2021; Ali & Alhassan, 2021). Additionally, according to Tauginien and Jurkeviius (2017), the terms contract cheating, essay mill, paper mill, and unethical tutoring are all interchangeable in the literature. Erguvan (2021) disagrees with this use of the phrases as they do not have the same meaning. In light of the aforementioned information, the term 'contract cheating' is used in this article to describe a practice whereby students hire third parties for scholarly projects, whether they are paid or not.

In higher education, examinations exist as measures of learning, and academic misbehaviour within the process weakens the acceptability of the qualification. When assessment processes cannot provide trusted results, it poses a challenge to the validity of qualifications and the trustworthiness of certificates and degrees (Goff et al., 2020; Martin, 2017). Similarly, there is a joined risk in the trust that society has in educational institutions (Comas-Forgas et al., 2021). Hence, factors such as maintaining high academic standards, academic integrity, and quality assurance have been identified as crucial to minimising contract cheating by higher education institutions.

Most recently, technological improvements in the socio-economic context of tertiary education (Lines, 2016) have led to an increase in cheating behaviours. Noticeably the advent and the expansion of the Internet and its facilities changed how contract cheating occurred globally (Erguvan, 2021; Eaton, 2022). Many higher education institutions have used online or distance learning platforms of instruction for years. Sometimes, students are required to complete assessments in an environment without close supervision, and students have a considerable number of chances to cheat on their work. It is believed that online testing offers additional cheating opportunities as compared to traditional, live-supervised classroom environments (Holden et al., 2021; Lancaster & Clarke, 2014; Slade et al., 2019). This has been worsened by the COVID-19 pandemic, particularly in universities and almost all education institutions that had to transition to online teaching and assessments.

When ethics are concerned, highlighting the outcomes of recent studies Comas-Forgas et al. (2021) suggest that there is a close association between academic dishonesty and professional dishonesty. Further, empirical evidence from research studies has demonstrated that students who engage in dishonest activities in classrooms and/or examinations, particularly undergraduate students, are more likely to establish unsuitable and unacceptable behaviours during their professional life and vice versa (Guerrero-Dib, 2020; Hill et al., 2021). Moreover, Orosz et al. (2018) identified a strong affiliation between academic dishonesty and the level of corruption in a country. In that sense, negligence of cheating behaviours in higher education seems to stimulate

corruption and dishonest behaviour. On the other hand, honesty is a highly valued personal quality that begins within the individual, especially as a result of education and extends into the community through practices. Violation of 'honesty' in an academic setting may have a negative impact on society.

Consequently, contract cheating has become increasingly a global issue in the higher education setting, and the focus of the present study is to examine the concept giving importance to the following areas.

- What are the primary factors that influence a minority of students to resort to contract cheating and keep the majority of students away from such dishonest behaviour?

- How can assessment design encourage authentic learning and minimise contract cheating?

- What are the impacts on academic standards and quality assurance due to contract cheating?

## Contract cheating

Contract cheating is academically unethical and totally unacceptable. It is considered one of the most serious breaches of academic integrity (Eshet, 2022), which continually increases the suppression of other forms of cheating acts. Hence on a global scale, higher education institutions are trying to tackle the issue with various remedial measures (Erguvan, 2021). Contract cheating behaviours among students may come in many models (Hill et al., 2021) and can appear in any kind of printed or handwritten work (Erguvan, 2021).

Some authors believe that contract cheating necessarily engages a financial transaction (Walker & Townley, 2012) between a customer (student) and a service provider (company), whereas others consider it as a learner outsourcing their work with no money involved for the service they receive (Hill et al., 2021; Eaton & Turner, 2020). In line with Harper et al. (2019) and Lancaster and Clarke (2016), students can use essay writing services or get support from peers, family members or private mentors, and many other outsiders. According to Erguvan's (2021) observations on many occasions of reported contract cheating, colleagues have exchanged their work with each other just as a favour or as a help. According to recent research, students prefer to turn to their close friends and family members for assistance in completing assessments rather than looking for commercial service providers since paying for the work is not always required by close ones (Armond & Varga, 2021). Hence, contract cheating does not depend on money exchange at all times (Hill et al., 2021) and can be funded or not funded (Curtis et al., 2018; QAA, 2020) and the funded contract cheating is referred to as "commercial contract cheating" (Rundle et al., 2019).

Contract cheating is a branch of a massive universal academic business (Lancaster, 2020), and service providers are to be found mainly in the English-speaking Western world (Lines, 2016; Amigud & Dawson, 2019). The popularity of contract cheating services is increasing, and it is effectively involved in advertising to students at all study levels, using advances in digital technology. The ever-growing visibility and highly attractive marketing and advertising techniques of essay mills have made the customer attracted to contract cheating services (Erguvan, 2021). Ease of purchasing at a low cost and quickness (Wallace & Newton, 2014) have increased students' temptation to cheat. When considering the discipline types, Business and Computing studies demonstrate a higher number of contract cheating transactions (Lancaster, 2020). However, it is evident that contract cheating service providers are already deep-rooted in all the subject areas at almost all levels of study. At the same time, students also seek the support of those services to pass the barriers in their academic path created by the socio-economic and cultural contexts.

## The role of culture and the internet age in contract cheating

Technological and economic development has dramatically changed the social structures creating a competitive socio-economic environment. The situation has worsened with the emergence of online social networks. These radical changes have indirectly approached the young generation exerting extra pressure on their academic life, forcing them to excel since academic achievements or paper qualifications have become a deciding factor to win the competition in professional life. Hence, the majority attempt to achieve their academic targets by any means at any cost, and as a result, students seek the assistance of commercially available third parties to complete their assignments, essays, and projects, whereas, within current socio-economic contexts, most potential and skilled individuals are always benefited. On the contrary, the commodification of higher education and e-commerce are backing the rapid growth and popularity of a 'sharing economy' (Williamson, 2019; Bretag et al., 2018).

New forms of customer behaviour and sharing economy have aggravated the situation giving rise to academic cheating behaviours globally. Simultaneously, under extreme stress conditions, an increase in contract cheating can be observed (Bretag et al., 2018). The integrity of higher education is affected by a number of factors ranging from a reduction in public funding to increased marketisation and internationalisation, availability of disruptive technologies, and unsecured job markets (Hill et al., 2021). Furthermore, the arrival of digital technologies triggered this speedy decline in academic integrity (Erguvan, 2021; Ison, 2020; Lancaster & Clarke, 2014) as the 'sharing economy' facilitates anyone to outsource any kind of work or goods and services virtually (Bretag et al., 2019a). That has intensified as the millennials have grown up with online environments that encourage sharing information, which progressively encourages cooperative learning approaches allowing students to share information and their work with each other (Lines, 2016).

Several studies have tried to find the root cause for online students' increased engagement in contract cheating. The Internet can cover the separation between honest and dishonest behaviour in academic work; in particular, this comprises the issue of psychological distance, which

unfavourably affects interpersonal social relationships and introduces ethical distancing (Ahsan et al., 2021). According to the revealed facts, the current socio-cultural context and the internet collectively affect the students' cheating behaviours. There are many resources, particularly on the internet, that encourage students to engage in dishonest academic behaviour. Hence, culture and the internet age are important in this discussion as the factors that influence academic cheating.

## Online/hybrid learning and assessment environments

In response to COVID-19, educational institutions suddenly shifted from in-person mode to emergency remote teaching and learning, removing the academics and students from their usual teaching and learning environments. Students lost their regular contact with peers and teachers, making them feel more vulnerable and isolated. In addition, students had to take their academic evaluations in online mode, and many had made it an opportunity to cheat, aiming for higher grades. Particularly, students supposed that cheating in virtual examinations was more stress-free than the ones held in face-to-face settings (Erguvan, 2021). The data presented in Erguvan (2021) has shown an increase in interest in internet searches for online exam cheating in Spain with the onset of the world pandemic. They emphasise some other research outcomes and suggest that online exams, regardless of the medium of instruction, are vulnerable to breaches of academic integrity.

In addition to that, Comas-Forgas et al. (2021), Erguva (2021), and Ahsan et al. (2021) confirm that the problem of contract cheating has never been as severe as during the Covid-19 pandemic with a speedy growth of many novel methods distinctive to the online learning contexts (Holden et al., 2021). Parallel to that, many third-party contract cheating service providers have aimed students to get the benefit of the uncertain and anxious mindset of students (QAA, 2020). As a whole, Eaton (2022, n.p.) mentions that "in the course of the Covid-19 crisis, we have certainly seen increases in violations of academic integrity", with the increased temptation of students to engage in contract cheating (Ahsan et al., 2021). Relating to that, Eshet's (2020) study results have also shown a substantial decrease in the level of academic integrity during the period to the closure of the first rise of COVID-19 outbreaks.

Undoubtedly, speedy and continuous internet access has altered the students' strategies of learning, engaging with study materials, researching, and producing their own work (Lines, 2016), throughout the pandemic without the direct support and assistance of the teachers or the instructors and lacked chances to develop face-to-face interactions with colleagues (Awdry & Newton, 2019). They all collectively generated dissatisfaction in students towards online practices, and as a side effect of COVID-19, contract cheating became a significant issue in higher education. Studies from various geographical and economic regions revealed that the negative consequences of online education have forced students to cheat. For instance, studies by Mok et al. (2021) and Tran et al. (2021) respectively identified why contract cheating has rapidly increased, taking examples from Bangladesh, Hong Kong, and Vietnam. In accordance with the results, during the pandemic, students emotionally struggled while some showed signs of depression. Further, they were unsatisfied with online education and they were incompetent in technology or with limited access to technology and related hardware to complete online assignments. The growth of contract cheating during the pandemic is a result of a number of factors, for example, academics not setting assessments as appropriate for e-assessments, lack of understanding of students networking through various modes, including social media, students' increased stress levels, and advertising by contract cheating service providers (Eaton & Turner, 2020).

Hence, identifying the negative impacts of contract cheating on academic integrity, and the trust of the general public towards graduates, their professional lives, and education institutes, many approaches have been taken by the respective authorities to minimise it.

## Role of technology and social media in contract cheating

Among various factors that stimulate contract cheating, the role of technology and social media is indispensable. The addition of high-quality features to social media has opened up a number of ways and means for students to identify various options for carrying out plagiarism (Bautista & Pentang, 2022) and contract cheating. Social media and intermediary websites work side by side to make a bridge between students and providers who supply contract cheating services (Amigud & Dawson, 2019). Contract cheating has been advanced in two ways as a result of technological advancements (Rigby et al., 2014). First, technical modification has directed cheaters into the contract cheating services because the likelihood of uncovering old-style cut-and-paste and secondhand papers has increased with the use of plagiarism detection software such as Ouriginal, Turnitin, etc. Second, the internet has minimised customer search costs while facilitating quick ordering, payment, and provision.

According to Comas-Forgas et al. (2021), YouTube is one of the best measures of the prevalence of cheating on examinations during the pandemic because a considerable number of videos relating to such experiences can be discovered there. Also, many facility providers are using social media apps such as Twitter to attract students when they are in their weakest states (Amigud & Lancaster, 2019). However, recent studies have found that students using contract cheating services are at risk of being tricked or bribed (Lancaster, 2018). So, it is critically important to improve student awareness of the risks caused by engaging with contract cheating sites (Dawson et al., 2019). Hence, rather than punishing after the mistake, it is wise to take remedial measures at the bottom level. But then again, detecting and proving the cheating act is considered difficult because of the advanced nature of the services. Therefore, determining the part that technology plays in encouraging academic fraud is important. On the other hand, doing so will help in formulating strategies for preventing the practice through the technology itself.

## Practices and approaches taken by higher education institutes to minimise contract cheating

Globally, universities and other educational institutions are struggling to control contract cheating. International concerns towards contract cheating are continuously increasing, and they include government actions and legal actions (Lancaster, 2020). Various judicial steps have been taken to deal with contract cheating service agreements. In some states, the act of subcontracting is treated as a crime with legal consequences (Amigud & Dawson, 2019). In the United Kingdom, there have been nationwide requests for action to sanction the supplies and promotions of essay mill cheating service providers (Morris, 2018) and to enact new rules and regulations aimed at contract cheating providers (Draper & Newton, 2017). Since 2022, it has been illegal to use and provide contract cheating services.

Apart from that, a study done at the University of California has emphasised the need to make students aware of the implications of being involved in cheating (Reddin, 2021). In addition, students are asked to sign a special statement before the examinations, and as mentioned in the statement, if a student is accused of cheating, then he or she may lose studentship. Significantly the particular action was a success and has reduced the number of cases. Australia, Europe, and the UK have also made large-scale efforts to combat contract cheating (QAA, 2020). In the meantime, as Eaton (2020) shows, Canadians' attempts to solve the issue of commercial contract cheating have been narrowed to local or regional levels, and quality assurance authorities maintain rather a cold reaction.

As Erguvan (2021) found, the Kuwait Ministry of Commerce has banned businesses that are involved in selling academic papers, projects, and other technical work on a few occasions following objections from the Ministry of Education. and particularly during the pandemic, most of them continued their services through virtual modes. According to the noted facts, it is evident that the evolution of the contract cheating industry is very fast and legal approaches are solely unable to control it since it is always stimulated and supported by technology and social media.

## Detecting contract cheating

Generally, contract cheating is difficult to identify and prove. Many researchers have shown that effective proof of contract cheating is largely dependent on the experience of the assessor and the knowledge of the student (Rogerson, 2017) in terms of the student's subject knowledge levels and writing style. In line with the findings of Erguvan's (2021) study in Kuwait, academics have the potential to detect an assessment that has been completed by someone else considering the standards of the completed work with respect to the actual ability of the student (including academic and linguistic abilities) as well as the technical details of the file submitted. In contrast, some expressed that contract cheating is a critical and complex area to identify, and proving such a case is a long and sometimes difficult, time-consuming process (Ali & Alhassan, 2021; Awdry & Newton, 2019).

Effective and efficient solutions for detecting contract cheating are still not being found, but many are in use with their plus and minus points. Among them, technology-based remedies and detection programmes are at the forefront of all. Nevertheless, word-matching detection applications such as Turnitin, PlagScan, AntiPlag, TeSLA, and Urkund could use to recognize subcontracted academic work (Lancaster & Clarke, 2016; Wang & Xu, 2021), they are recognised as unsuccessful in detecting contract cheating (Ahsan, 2019) as work done by those services are normally skillfully written and sufficiently referenced (Lines, 2016). Software tools, such as Cadmus (Lines, 2016) and digital forensic methods – stylometrics and linguistics (Dawson et al., 2019; Ison, 2020) – may help address contract cheating. In particular, as reported in Eshet's (2022) study, although the software was capable of detecting direct copy-paste, tracing a custom-made one is not always possible. Even when using state-of-the-art automated detection methods, contract cheating remains difficult to detect. Besides, Amigud and Dawson (2019) mention that the use of text-matching apps has been found ineffective, as contracted assignments normally cover original content, making it hard to identify cheating. At present, there is no efficient tool or application to recognise any kind of cheating, and technology is not evolving to limit contract cheating (Erguvan, 2021; Hill et al., 2021).

Interviewing the student at the end of the assessed work, introducing remote invigilation using webcams or facial recognition apps, password-protected or sound-recognition applications, online or telephone questioning, or third-party confirmation are some of the approaches suggested to avoid contract cheating during online examinations. Although online supervising of remote examinations is possible through biometric data, eye movement, and keystroke tracking (Hill et al., 2021), it can be detrimental to students' psychological well-being (Eaton & Turner, 2020) due to violation of privacy concerns. However, the financial cost of software and other technology tools, varying policies, or not-so-user-friendly features of these applications (Erguvan, 2021) limit their usage. Furthermore, blocking certain websites on institutional devices, petitioning governments to sanction the supply and marketing of cheating services (Morris, 2018), introducing legal remedies, imposing financial punishments, and banning advertising (Tauginienė & Jurkevičius, 2017), and punishing customers and/or suppliers are some of the strategies proposed by researchers to block service providers. Accordingly, new approaches are wanted to sense subtler potential signs of contract cheating (Eshet, 2022). In addition to that, academics should be made aware of continual developments in the contract cheating industry. As a whole, knowledge of detecting contract cheating is important since it has a direct impact on academic quality and standards.

## Methodology

This study is grounded on a systematic review of available work related to contract cheating in higher education and its impacts on academic standards and quality. An extensive literature search was done on online databases, namely: Google Scholar, JSTOR, Taylor and Francis Online, Elsevier and recognized official websites. The pre-decided selection

conditions were used during the database search in order to keep the number of resources reasonable and adequate. To ensure the quality of the sources the search was limited to peer-reviewed journal articles, conference papers, and reports found in full text in institutional websites. Blog posts, books and physically available sources were not included. No limitations on the publication time or the geographical areas were considered and the language of selected sources was limited to English.  In addition, experimental and theoretical studies were taken into account during the selection process regardless of the type of study methodology (quantitative, qualitative, or mixed).

A significant amount of research has been selected to examine the concepts of contract cheating and its impacts on academic standards.  In the search, to ensure quality and the appropriateness of sources for the review, a wide variety of key terms and phrases were used in selecting items. They include mainly "contract cheating", "contract cheating – academic integrity", "contract cheating – higher education", "detecting contract cheating", "contract cheating – technology", "contract cheating – online/hybrid teaching and learning", "contract cheating – Covid-19", "contract cheating – assessment", and "contract cheating – reasons/factors". Furthermore, similar terms related to the examined issue, such as ghostwriting, essay mills, plagiarism and tertiary/university education, that often appeared interchangeably in texts, were also used in finding sources. As the search action resulted in an inadequate number of suitable and reachable sources, the reference sections of the found texts were used in the search for more relevant resources. As a result of the search, 126 documents were downloaded, and their titles, abstracts, and textual contents were studied in detail to extract the most appropriate sources. This caused the removal of duplicate sources and articles with dissimilar content, and the initial sample was reduced to 66 documents for analysis. The content of the selected resources was studied comprehensively and analysed in detail. The review mainly focused on addressing the following specific research questions mentioned in the introduction:

- What are the primary factors that influence a minority of students to resort to contract cheating and keep the majority of students away from such dishonest behaviour?

- How can assessment design encourage authentic learning and minimise contract cheating?

- What are the impacts on academic standards and quality assurance due to contract cheating?

In order to collect the necessary data, each paper was studied in detail, examining the content and extracting any relevant information to support the research questions. The data were coded as "reasons for contract cheating", "minimising contract cheating", and "impact of academic standards" to reduce the risk of missing important information.  Then they were organized to build up the answers for each question. As the final step, analysis and the discussion on revised data were done to come to conclusions and to identify further research directions.

## Results and analysis

Grounded on the directions provided by the background literature, three key issues identified were:

- why students are involved in contract cheating and the factors that keep students away from contract cheating;

- how assessment design motivates or demotivates contract cheating behaviour; and

- the impacts of contract cheating on academic standards and quality assurance.

These issues were addressed and further discussed with the aid of the available academic literature.

### Why are some students more motivated to cheat than others?

A significant number of studies have been completed to understand why learners cheat and why they do not (Bretag et al., 2019a; Amigud & Lancaster, 2019; Ahsan et al., 2021; Harper et al., 2019). Basically, the general theory of crime proposes that the failure of self-control is the foundation for unethical behaviour. On the basis of this, it is also possible to rationally explain the case of contract cheating behaviour. A theoretical foundation is also provided by routine activity theory and the rational choice perspective, which run parallel to the general theory of crime, and they also explain why anyone can engage in unconventional behaviour like contract cheating (Eshet, 2022). However, Curtis et al. (2018) argue that the prevailing theory-based studies of contract cheating have been criminological rather than psychological. As Beckman et al. (2017) suggest, the two principal factors that permit contract cheating to take place are "motivation" and "opportunity". Further, some other studies have proposed "personal, institutional, medium-based, and assessment-specific, contextual, pedagogical, ideological and socio-cultural" as motivational factors for cheating (Holden et al., 2021; Ali & Alhassan, 2021). Generalising the reasons for the choice of contract cheating, Bretag et al. (2019a), Brimble (2016) and Lines (2016) mention the insights that there are lots of chances to cheat, increased availability of contract cheating services, students' misunderstanding that cheating is easy and will not be caught, challenging workloads and assignment difficulties, and lack of inspiration and personal factors: gender, personal temperaments, age, grades or scores and to help friends.

Accordingly, contract cheating appears to be activated by an array of influences ranging from social, economic to cultural, and from educational, academic to personal (Ali & Alhassan, 2021). Hence, particular to this study the primary factors that influence contract cheating are discussed under two main categories, intrinsic: personality factors, and extrinsic: pedagogical, institutional, and socio-cultural factors.

Personality traits or factors are frequently acknowledged in the literature as predictors of why students are involved in academic delinquencies (Rundle et al., 2019). Holden et al.

(2021) highlight three specific conditions referred to as the 'fraud triangle': (1) opportunity, (2) motivation, pressure, or requirements, and (3) rationalisation or attitude, as the personal or individual factors that predict cheating behaviour. Further, students' intentions for learning vary, and they are mostly under pressure with a number of academic projects since it may be the deciding factor of their future. The personal inability to manage time (Rogerson, 2017) brought by life complexities is a critical issue that students undergo. Procrastination, a tension between 'learning for learning's sake' and a 'getting through it adequate to graduate' attitude (Blum, 2016), may lead learners to be involved in cheating behaviours. Erguvan's (2021) study reveals that laziness and the desire to get high scores or grades with little or no effort are some factors linked with contract cheating. High stress created due to a competitive mindset, high self-esteem and fear of losing social respect may also motivate cheating. Slade et al. (2019) have identified student circumstances as one of the central causes of contract cheating, and those supported with time pressures, personal difficulties, and a history of poor academic records may encourage students to use contract cheating services (Amigud & Lancaster, 2019; Eaton, 2020). In addition to that, cheating may be typical personal behaviour or simply a feature of one's personality. Coupled with that, low conscientiousness and no fear or shame of detection of cheating and its consequences may also attract students. Anxiety, a lack of confidence in academic writing and conventions of the subject, and fear of failure also trigger cheating behaviours in students. Misleading expectations that cheating will bring positive results, normalisation of cheating and the idea that others are doing it successfully (Ahsan et al., 2021) may possibly encourage students to subcontract their academic work.

As the commercialisation of education has broken the geographical limits, many students acquire their higher qualifications from foreign countries in which they learn in non-native languages. There is a common idea that students not learning in their mother tongue are more likely to cheat. For example, Bretag et al. (2019a) and Amigud and Lancaster (2019) found that not being a native speaker of the medium of instruction and lack of language proficiency a cause of contract cheating. Several study results show that self-reported commitment to contract cheating was related to disappointment with the learning and teaching and the misperception that opportunities to cheat are there within the project or assignment. Also, a lack of engagement with studies results in a lack of understanding (Curtis & Vardanega, 2016) and makes students incompetent in terms of an assessment's requirements and subject knowledge. Overwhelmingly difficult assessment tasks, decontextualiaed assessments (Ahsan et al., 2021) that involve higher assessment weightings, have limited timeframes, and offer fewer chances for comments (Slade et al., 2019) are other motives for contract cheating. Bretag et al. (2018) confirm the time issue further, stating that too much material is covered in too short a time, and the short turnaround times on assessments may probably increase the tendency for cheating.

Institutional factors and policies related to academic standards and integrity directly impact building a culture of cheating. For example, inadequate sanctions and punishment of academic dishonesty, too simple institutional policies, an inadequate effort made to advise students about these policies, and a lack of understanding of staff members about the policies against academic misconduct provide ample opportunities for students to normalise the cheating behaviours and unconscious promotion of cheating can result. Accordingly, wherever the opportunity is available, students think they can cheat unnoticed (Holden et al., 2021; Bretag et al., 2018). Agreeing with the argument further, Holden et al. (2021) mention that negligent or inadequate penalisation of academic dishonesty, insufficient awareness of policies and standards among students, instructors, and administrators, and unsatisfactory efforts to notify students about these policies and standards motivate students to contract cheat. Husain et al. (2017) also approve that state student perception of staff apathy, knowledge and dedication, and students' awareness regarding the lack of institutional support for academic integrity increase contract cheating. Additionally, the issue becomes even worse when students realise the lenient approaches of educators with regard to cheating and shortcomings in how such behaviours are handled. Empirical research demonstrates that when academic staff or the university expresses little to no concern, students are more likely to justify cheating (Harper et al., 2019). Similar results have been obtained in a study conducted on Iranian ELT students (Husain et al., 2017), and it revealed that having kind and student-friendly academics is a key reason for engaging in different forms of academic cheating, including plagiarism. The cultural and social pressure on students to achieve a higher academic profile has severely affected the occurrence of cheating habits. Currently, competition is a part of the academic system, and parents demand good grades in the examinations. Other than parental pressure, team member issues and influences are attached to outsourcing issues (Ahsan et al., 2021).

As far as the reasons for not being involved in contract cheating are concerned, some researchers highlighted a number of primary reasons that discourage students' involvement in contract cheating: opportunity, fear of detection and punishment, trust, motivation for learning, time management, morals, and norms (Rundle et al., 2019). Studies by Curtis et al. (2018) have empirically found that "higher levels of self-control were protective against student engagement in cheating behaviours". Moreover, students do not engage in contract cheating for a variety of reasons, including their inability to rationalise the actions of outside sources or lack of faith in them (Rundle et al., 2019). Furthermore, the perceived seriousness of unethical behaviour and acceptance of the perceived social norms, especially those of the person's gang or peer group (Curtis et al., 2018; Rundle et al., 2019) might prevent students from looking into shortcuts to complete their work. Rigby et al. (2014) revealed that students who see the benefits of the study are more hesitant to misconduct than those who do not. Contrastingly, Awdry and Newton (2019) found individual factors, discipline, and country do not predict contract cheating and Erguvan (2021) also mentions that the participants in their study have not linked personal factors to the rising numbers of contract cheating.

## How can assessment design encourage authentic learning?

Outcomes of assessments and evaluation of students' learning are an important indication of the quality of the instructional process, and the type of assessment likely affects the result depending on the individual's performance. Similarly, the number of cheating acts would be expected to vary according to the assessment type (Holden et al., 2021). Bretag et al.'s (2019a) study report provides strong experimental evidence for conceptualising the interconnection between contract cheating and assessment. Findings show that no assessment type can effectively eliminate the likelihood of being cheated. Lancaster and Cotarlan (2021) highlight that many practices of assessment and examinations are vulnerable to contract cheating, particularly when courses are taught and assessed online. To minimise and prevent such vulnerabilities, new forms of assessment tools and techniques are vital. Although reasonable and practical methods for minimising academic dishonesty have long been taken by educational institutions and policymakers, it continues at higher rates with the advancement of technology. However, Lancaster and Cotarlan (2021) argue that many assessment and examination techniques are open to contract cheating in online learning environments and that necessitates the use of novel assessment technologies. As they further elaborate, although educational institutions and authorities have long adopted reasonable and feasible measures such as authentic and personalised assessment tasks to reduce academic dishonesty, it persists at greater rates. According to Ahsan et al. (2021), the institution, the academic, and the student form the assessment supply chain. When the learner subcontracts the assessment, partially or fully, he/she has broken the contractual relationship. Therefore, it is essential to take necessary measures to safeguard the smooth flow to obtain the true estimation of students' ability levels while keeping academic integrity. Hence, many scholars and researchers have stressed the need for changing teaching pedagogies and assessment designs. As they suggest, assessment should be strong enough to minimise the possibility of cheating while providing space for the learner to show their knowledge and skill levels. Furthermore, Holden et al. (2021) emphasise the need to pay attention to the assessment format and the presentation. Format, content, declaration of academic integrity, alternative forms, and standard design for the number of assessments that count towards final grades are considered under the assessment structure. On the other hand, limited space of availability, time limits, disabled copy/paste functionality in assessment software, preventing referring to previous items, and response option randomisation are factors closely observed during the assessment delivery.

In the discussion of assessment, designing 'authentic assessments' has been recommended by numerous authors, though authentic assessment methods are still vulnerable to contract cheating. As expected, an authentic assessment may limit the impact of cheating since the students will have to actually use their knowledge and skills. Such assessment makes it more challenging to complete relying on contract cheating services. In contrast, the study of Ellis et al. (2019) has provided strong experimental proof to show that authentic assessment tasks do not guarantee academic integrity. For example, a candidate has to face his/her own in practical exams, face-to-face assessments, oral examinations, or presentation of written assignments. In-class tests and invigilated exams (Lines, 2016), designing assessments with specific contextual requirements (Bretag et al., 2019b), and adopting the assessment to the context (Eaton, 2020) are also proposed as remedies for contract cheating issues.

Although time pressures have been found to be a reason for students choosing to use contract cheating services (Wallace & Newton, 2014; Slade et al., 2019; Amigud & Lancaster, 2019), it seems to be acceptable to minimise opportunities for contract cheating by having short turnaround times for assessment submission (Bretag et al., 2019a). Furthermore, regarding online exams, preventing the use of supplementary electronic resources during exams and hindering students from using external websites or using unauthorised applications on the same machine that is used to take the exam probably limits students' engagement in cheating.

## Impacts on academic standards and quality assurance

The issue of cheating is not specific only to higher education, but it affects all categories of education institutions regardless of the disciplines and study levels. Higher education providers are responsible for ensuring the quality of their services. On the other hand, the qualification offered by the institute essentially needs to meet nationally and globally accepted standards. Further, the assessment outcome should essentially show the students' true achievement level. However, as a result of contract cheating, students can potentially achieve degree qualifications that do not tally their knowledge and skill set (Bretag et al., 2019b). According to Rigby et al. (2014), contract cheating causes information anomalies, and it has a negative economic impact on graduate attributes by lowering degree grades. In that sense, contract cheating raises an alarming risk towards the reliability of the student's qualification and skill levels and undermines the validity of the student's knowledge evaluation (Jurkevičius & Tauginienė, 2017).

Considerable social mistrust in universities' quality assurance mechanisms (Dawson et al., 2019) in terms of academic quality and standards, assessment system (Slade et al., 2019), trustworthiness and reliability of the institution (Harper et al., 2019; Lancaster, 2019; Slade et al., 2019) create a chain of issues such as destroying community confidence in higher education standards (Jurkevičius & Tauginienė, 2017; Hill et al., 2021) and graduate reputation and credibility related issues (Slade et al., 2019). Prospective employers may not keep faith in universities to generate skilful graduates who are ready to work (Hill et al., 2021). Further, contract cheating leads to the deprivation of fair competition and demotivation to study honestly and is disadvantageous to honest, diligent students due to unmerited academic credits earned by cheating (Jurkevičius & Tauginienė, 2017). It also demotivates staff, adversely affects student equity, undermines employee and employer morale, and presents a serious threat to society as underqualified graduates end up as working professionals (Ahsan et al., 2021; Slade et al., 2019). For example, future doctors, engineers, and social workers who have contracted out their academic work could

pose a serious risk to society as states defrauding future employers and career disruption is the result (Jurkevičius & Tauginienė, 2017; Bretag et al., 2019a).

Hill et al. (2021) describe the extent of the influence of contract cheating in detail based on the study related to COVID-19. As they analysed, the students who use the 'services' do not develop essential skills but still receive grades without necessary effort. Another adverse effect highlighted is that the teachers or the instructors who notice and report the cheating acts are losing valuable resources that can be owed to the development of teaching resources, and academics who do not act in the same way are seen as inexperienced by students. Similarly, the universities that act against contract cheating might have lower enrolment, while universities that neglect to act upon cheating might face the issue of letting down academic standards.

Therefore, institutions of higher education need to recognise why students are involved in contract cheating, and then they need to make changes (Williamson, 2019) accordingly to minimise the damage to academic standards and quality. Comparably multifaceted resolutions are vital, including academics and civil society (Hill et al., 2021), to address the global issue.

## Discussion and conclusions

The review reveals that academic contract cheating needs to be answered globally due to the high competitiveness in obtaining academic qualifications, the commercialisation of education, and the tendency for e-education. On the other hand, it is a result of the impact of a number of internal and external factors on the student. In addition, there is a noteworthy increase in contract cheating and service providers during the recent pandemic. The influence of each on students' contract cheating habits has been studied adequately, but as Erguvan (2021) highlights, the impact of circumstantial or background features such as society, culture, and religion on cheating behaviours has not been sufficiently studied. However, the presence and extent of cheating depend on the intensity with which the factors influence the student. For example, if institutional parameters such as detection probabilities and penalties are at a low rate, then there is a chance for the student to outsource the academic work to achieve a higher grade. Hence contract cheating can be minimised by blocking the opportunities and motivations.

The research outputs evidence that contract cheating is considerably difficult to identify and confirm (Ahsan et al., 2021). Correspondingly and many forms of assessment and examinations are susceptible to contract cheating, especially where courses are taught online (Lancaster & Cotarlan, 2021). Furthermore, no discipline area is immune from contract cheating (Lancaster, 2020). Therefore, to preserve academic integrity and to give a trustworthy outcome, professional practices in academia need to be updated timely. Henceforth, being a professional, one should possess technical, practical, and/or theoretical competencies to detect cheating behaviours of the students. Other than that, professionals need to be aware of the behavioural patterns

that are considered prohibited, and it is better if they can be given training to handle current digital applications to identify cheating. Changing the assessment methods and moving to more authentic assessment types will minimise the issue satisfactorily.

The rise of AI models like ChatGPT has opened another path for contract cheating as it can potentially be used in generating academic content quickly and easily. AI models like ChatGPT are capable of producing human-like texts, and educators and the traditional plagiarism detection tool will find it difficult to differentiate the outcome (Mohammadkarimi, 2023; Hassoulas et al., 2023; Chaka, 2023). Further, students can use the AI-generated text as a guide to modify their answers to appear more original, making them harder to detect. Hence it is essential to establish guidelines and policies regarding the use of AI models for academic purposes (Rudolph et al., 2023a, 2023b). On the other hand, AI technologies can be used to develop advanced detection tools that can better identify instances of contract cheating.

As alternatives for minimising contract cheating, changes in the evaluation model, conveyance, and continuous guided inspection and support, improved institutional resourcing, evidence-based developments in curriculum and pedagogy to foster effective learning and skill development, and working with students in a partnership frequently emerge as main concerns of the educational contexts (Lancaster, 2020). In that lens, students' tendency to hire outsiders to complete their assignments or any other work is reasonable to think of as a cause of inadequate or unsatisfactory teaching, resourcing, or defects in pedagogical practices. Bretag et al. (2019b) confirm the argument and state contract cheating is partially affected by assessment, and therefore, proper course planning, resourcing, and evaluation should be done while adjusting students' perspectives, subjective norms, or their expected personal principles or temperaments (Curtis et al., 2018) to reduce contract cheating intentions. As well, understanding the relationship between the instructional settings and students' fraudulent behaviour is equally important.

Reported literature shows that although technology performs a main function in finding academic cheating, there are certain limitations and sometimes failures in detecting cheating. The use of video summarisation or video abstraction utilises artificial intelligence methods, web video recordings, live online proctoring, or web video conference invigilation (Holden et al., 2021) among the suggested methods of detection.

The experience of professionals about the students and the cheating identification through language, structure, and content is believed to be successful to some extent, yet personal biases and interests might be influential in the decision. Hence, the need for effective improvement in technology-based detection methods or systems is urgent and important. Moreover, it is the common responsibility of officials and academics to clearly define what is meant by academic fraudulence and what behaviours are classified as educationally dishonest in order to guarantee academic trustworthiness and prevent students from contracting

cheating in tertiary education.

Furthermore, governments and academic institutions have also adopted a range of legal actions and policy decisions to divert students from contract cheating. Higher education is the main responsible authority to act against contract cheating. However, the lack of commitment from institutions to safeguard or practice those rules and regulations creates ample opportunities for students to follow the wrong path. Therefore, institutional involvement, including authorities, students, and the academic staff, is needed to build up an academically honest culture with both awareness and practice. Apart from that, students need to be made aware of the consequences of being dishonest in their academic journey and how it will affect their future lives. As a whole, contract cheating affects not only one's academic results but also the status of the institutions, educational standards, qualifications, professional conduct, and the safety and security of the general public.

## Recommendations

Grounded on the outcomes of the study, recommendations related to contract cheating and academic integrity in higher education are discussed within this section. In that regard, several suggestions to address the issue have been made by the respective authorities, including scholars and educational quality assurance organisations (Lancaster & Clarke, 2016; QAA, 2020). At the very basic level, increasing the attentiveness toward contract cheating among the academic staff and newcomers is of considerable importance since both parties equally experience its unfavourable consequences. Hence, to ensure academic honesty in higher education, respective institutions must clearly define what behaviours are considered academically dishonest and need to convey them to students. Informing learners about the significance of keeping academic integrity at the inauguration and making them practice ethical values, directing students to establish a positive focus on facing academic challenges, supporting students to establish their own strategies in studying, encouraging students to enable their skills in academic writing, using academic resources and researching, emphasising learning goals, and developing their self-control would hopefully keep students away from essay mills and other kinds of commercially available services.

Equally, keeping the academic staff up-to-date with the newest trends in contract cheating and conducting staff professional development programmes, including required training to handle detected unethical conduct, setting effective academic regulations, and fair and transparent practice would be helpful in solving the problem. At the same time, it is important to establish measures to discourage or reduce students' involvement in contract cheating since the continuous practice may normalise unethical behaviours and demotivate students' tendency to achieve their goals with their true potential. Moreover, tertiary education institutions are responsible for establishing a culture of academic integrity. The commitment to safeguarding academic integrity can be conveyed through institutional standards and ethics, policy statements or mission declarations, or even through the student prospectus.

Addressing cheating strategically would be the best way to manage contract cheating. Worldwide, governments have initiated legislation against illegal services that provide contract cheating opportunities (Awdry & Newton, 2019). Further, the international network of contract cheating facilities is evolving rapidly, crossing borders. Therefore, it seemingly requires international collaboration to set up international standards and laws for contract cheating.

Research on contract cheating has been expanded across different dimensions but significantly centred on a few countries, like Australia, the United Kingdom, and Canada. Hence, uncovering the situation of other countries that remain under-researched is important. In addition, motives for students' engagement in contract cheating have been extensively studied, and the causes for not being involved in cheating are yet to be studied. In conclusion, it is obvious that to prevent students from contract cheating and to preserve academic integrity, there is no single reliable solution; instead, we need to go for globally accepted integrated approaches.

This work has certain limitations, which should be acknowledged. For instance, this study's coverage of articles may be constrained by the search terms and electronic databases used. As far as future research is concerned, it can be focused on the impact of novel applications such as ChatGPT on academic cheating behaviours. In addition, designing and assessing educational interventions aimed at preventing contract cheating would be better than imposing laws and punishment. We recommend investigating more on what are the perceptions and motivations of students to engage in cheating and how they can be addressed. Investigating the long-term effects of contract cheating on students' learning outcomes and studying how contract cheating impacts graduates' preparedness for the workforce will reveal the gaps that policymakers need to focus on in future to maintain and safeguard academic quality and standards.

## References

Ahsan, K., Akbar, S., & Kam, B. (2021). Contract cheating in higher education: A systematic literature review and future research agenda. *Assessment & Evaluation in Higher Education, 47*(4), 523-539. https://doi.org/10.1080/0260293 8.2021.1931660

Ahmadi, A. (2014). Plagiarism in the academic context: A study of Iranian EFL learners. *Research Ethics, 10*(3) 151–168.

Amigud, A. (2019). Cheaters on Twitter: An analysis of engagement approaches of contract cheating services. *Studies in Higher Education, 45*(3), 692-705. https://doi.org /10.1080/03075079.2018.1564258

Amigud, A., & Dawson, P. (2019). The law and the outlaw: Is legal prohibition a viable solution to the contract cheating problem?. *Assessment & Evaluation in Higher Education 45*(1), 1-11. DOI: 10.1080/02602938.2019.1612851

Amigud, A., & Lancaster, T. (2019). 246 reasons to cheat: An analysis of students' reasons for seeking to outsource academic work. *Computers & Education, 34*, 98–107. https://doi.org/10.1016/j.compedu.2019.01.017

Armond, A., & Varga, O. (2021). *An alarming facet of ghostwriting: The contract cheating.* https://h2020integrity.eu/an-alarming-facet-of-ghostwriting-the-contract-cheating/

Awdry, R., & Newton, P. M. (2019). Staff views on commercial contract cheating in higher education: A survey study in Australia and the UK. *Higher Education, 78*, 593–610. https://doi.org/10.1007/s10734-019-00360-0

Bautista, R. M., & Pentang, J. T. (2022). Ctrl C + Ctrl V: Plagiarism and knowledge on referencing and citation among pre-service teachers. *International Journal of Multidisciplinary: Applied Business and Education Research, 3*(2), 245–257. https://doi.org/10.11594/ijmaber.03.02.10

Beckman, T., Lam, H., & Khare, A. (2017). Learning assessment must change in a world of digital "cheats". *Phantom Ex Machina: Digital Disruption's Role in Business Model Transformation*, 211-222.

Bleeker, K. (2008). *To be honest: Championing academic integrity in community colleges.* Community College.

Blum, S. D. (2016). "What it means to be a student today." In T. Bretag (Ed.), *Handbook of academic integrity* (pp. 383–406). Springer Singapore. doi: 10.1007/978-981-287-098-857

Bretag, T., Harper, R., Burton, M., Ellis, C., Newton, P., Rozenberg, P., ... & van Haeringen, K. (2018). Contract cheating: A survey of Australian university students. *Studies in Higher Education, 44*(11), 1837-1856.

Bretag, T., Harper, R., Burton, M., Ellis, C., Newton, P., van Haeringen, K., ... & Rozenberg, P. (2019a). Contract cheating and assessment design: Exploring the relationship. *Assessment & Evaluation in Higher Education, 44*(5), 676-691.

Bretag, T., Harper, R., Ellis, C., Van Haeringen, K., Newton, P., Rozenberg, P., & Saddiqui, S. (2019b). *Contract cheating and assessment design: Exploring the connection.* Australia. Department of Education and Training (DET).

Brimble, M. (2016). "Why students cheat: An exploration of the motivators of student academic dishonesty in higher education". In R. Bretag (Ed.), *Handbook of academic integrity* (Chapter 26). Springer Press.

Chaka, C. (2023). Detecting AI content in responses generated by ChatGPT, YouChat, and Chatsonic: The case of five AI content detection tools. *Journal of Applied Learning and Teaching, 6*(2), 1-11. Advanced online publication. https://doi.org/10.37074/jalt.2023.6.2.12

Comas-Forgas, R., Lancaster, T., Calvo-Sastre, A., & Sureda-Negre, J. (2021). Exam cheating and academic integrity breaches during the COVID-19 pandemic: An analysis of internet search activity in Spain. *Heliyon, 7*(10), e08233.

Curtis, G. J., Cowcher, E., Greene, B. R., Rundle, K., Paull, M., & Davis, M. C. (2018). Self-control, injunctive norms, and descriptive norms predict engagement in plagiarism in a theory of planned behavior model. *Journal of Academic Ethics, 16*, 225-239.

Curtis, G. J., & Vardanega, L. (2016). Is plagiarism changing over time? A 10-year time-lag study with three points of measurement. *Higher Education Research & Development, 35*(6), 1167-1179.

Dawson, P., Sutherland-Smith, W., & Ricksen, M. (2020). Can software improve marker accuracy at detecting contract cheating? A pilot study of the Turnitin authorship investigate alpha. *Assessment & Evaluation in Higher Education, 45*(4), 473-482.

Draper, M. J., & Newton, P. M. (2017). A legal approach to tackling contract cheating?. *International Journal for Educational Integrity, 13*(1), 1-16.

Eaton, S. E. (2020). Academic integrity during COVID-19: Reflections from the university of Calgary. *International Studies in Educational Administration, 48*(1), 80-85.

Eaton, S. E., & Turner, K. L. (2020). Exploring academic integrity and mental health during COVID-19: Rapid review. *Journal of Contemporary Education Theory & Research, 4*(2), 35-41. https://zenodo.org/record/4256825#.X6gXr5NKhm8. http://hdl.handle.net/1880/112729

Eaton, S. E. (2022). *Contract cheating in Canada: A comprehensive overview. Academic integrity in Canada: An enduring and essential challenge* (pp. 165-187). Springer.

Ellis, C., Van Haeringen, K., Harper, R., Bretag, T., Zucker, I., McBride, S., ... & Saddiqui, S. (2020). Does authentic assessment assure academic integrity? Evidence from contract cheating data. *Higher Education Research & Development, 39*(3), 454-469.

Erguvan, I. D. (2021). The rise of contract cheating during the COVID-19 pandemic: A qualitative study through the eyes of academics in Kuwait. *Language Testing in Asia, 11*, 34. https://doi.org/10.1186/s40468-021-00149-y

Eshet, Y. (2022). Contract cheating in Israel during the Covid-19 pandemic. *European Conference on Academic Integrity and Plagiarism 2022 (ECAIP 2022).*

Fishman, T. (2014). *The fundamental values of academic integrity. International Center for Academic Integrity* (2nd ed.). Clemson University.

Goff, D., Johnston, J., & Bouboulis, B. S. (2020). Maintaining academic standards and integrity in online business courses. *International Journal of Higher Education, 9*(2), 248-257.

Guerrero-Dib, J. G., Portales, L., & Heredia-Escorza, Y. (2020). Impact of academic integrity on workplace ethical behaviour. *International Journal for Educational Integrity, 16*(1), 1-18.

Harper, R., Bretag, T., Ellis, C., Newton, P., Rozenberg, P.,

Saddiqui, S., & van Haeringen, K. (2019). Contract cheating: A survey of Australian university staff. *Studies in Higher Education, 44*(11), 1857-1873.

Harper, R., Bretag, T., & Rundle, K. (2021). Detecting contract cheating: Examining the role of assessment type. *Higher Education Research & Development, 40*(2), 263-278.

Hassoulas, A., Powell, N., Roberts, L., Umla-Runge, K., Gray, L., & Coffey, M. (2023). Investigating marker accuracy in differentiating between university scripts written by students and those produced using ChatGPT. *Journal of Applied Learning & Teaching, 6*(2), 1-7. Advanced online publication. https://doi.org/10.37074/jalt.2023.6.2.13

Hill, G., Mason, J., & Dunn, A. (2021). Contract cheating: an increasing challenge for global academic community arising from COVID-19. *Research and Practice in Technology Enhanced Learning, 16*, 1-20. https://doi.org/10.1186/s41039-021-00166-8.

Holden, O. L., Norris, M. E., & Kuhlmeier, V. A. (2021, July). Academic integrity in online assessment: A research review. In *Frontiers in education* (Vol. 6, p. 639814). Frontiers Media.

Ali, H. I. H., & Alhassan, A. (2021). Fighting contract cheating and ghostwriting in higher education: Moving towards a multidimensional approach. *Cogent Education, 8*(1), 1885837. https://doi.org/10.1080/2331186X.2021.1885837

Husain, F. M., Al-Shaibani, G. K. S., & Mahfoodh, O. H. A. (2017). Perceptions of and attitudes toward plagiarism and factors contributing to plagiarism: A review of studies. *Journal of Academic Ethics, 15*, 167-195.

Ison, D. C. (2020). Detection of online contract cheating through stylometry: A pilot study. *Online Learning, 24*(2), 165–142.

Jurkevičius, V., & Tauginienė, L. (2017). Ethical and legal observations on contract cheating services as an agreement. *International Journal for Educational Integrity 13*(1), 1-10.

Lancaster, T., & Clarke, R. (2007). Assessing contract cheating through auction sites – a computing perspective. In *Proceedings of 8th annual conference for information and computer sciences*. Higher Education Academy.

Lancaster, T., & Clarke, R. (2014). An observational analysis of the range and extent of contract cheating from online courses found on agency websites. In *Proceedings of 2014 eighth international conference on Complex, Intelligent and Software Intensive Systems (CISIS)* (pp. 56–63). IEEE. https://doi.org/10.1109/CISIS.2014.

Lancaster, T., & Clarke, R. (2016). Contract cheating: The outsourcing of assessed student work. In T. Bretag (Ed.), *Handbook of academic integrity*. Springer, Singapore. https://doi.org/10.1007/978-981-287-098-8_17

Lancaster, T. (2018). *Educational blackmail in the world of fake degrees, essay mills and contract cheating.* https://www.linkedin.com/pulse/educational-blackmail-world-fake-degrees-essay-mills-thomas-lancaster.

Lancaster, T. (2019). Profiling the international academic ghostwriters who are providing low-cost essays and assignments for the contract cheating industry. *Journal of Information, Communication and Ethics in Society, 17*(1), 72–86. https://doi.org/10.1108/JICES-04-2018-0040

Lancaster, T. (2020). Academic discipline integration by contract cheating services and essay Mills. *Journal of Academic Ethics, 18*(2), 115-127. https://doi.org/10.1007/s10805-019-09357-x

Lancaster, T., & Cotarlan, C. (2021). Contract cheating by STEM students through a file sharing website: A COVID-19 pandemic perspective. *International Journal for Educational Integrity, 17*(3), 1-16. https://doi.org/10.1007/s40979-021-00070-0

Lines, L. (2016). Ghost-writers guaranteeing grades? The quality of online ghost-writing services available to tertiary students in Australia. *Teaching in Higher Education, 21*(8),889-914. DOI: 10.1080/13562517.2016.1198759

Mohammadkarimi, E. (2023). Teachers' reflections on academic dishonesty in EFL students' writings in the era of artificial intelligence. *Journal of Applied Learning and Teaching, 6*(2), 1-9. Advanced online publication. https://doi.org/10.37074/jalt.2023.6.2.10

Morris, E. J. (2018). Academic integrity matters: five considerations for addressing contract cheating. *International Journal for Educational Integrity, 14*(1), 15.

Mok, K. H., Xiong, W., & Bin Aedy Rahman, H. N. (2021). COVID-19 pandemic's disruption on university teaching and learning and competence cultivation: Student evaluation of online learning experiences in Hong Kong. *International Journal of Chinese Education, 10*(1), 221258682110070. https://doi.org/10.1177/22125868211007011

Orosz, G., Tóth-Király, I., Bőthe, B., Paskuj, B., Berkics, M., Fülöp, M., & Roland-Lévy, C. (2018). Linking cheating in school and corruption. *European Review of Applied Psychology, 68*(2), 89-97. https://doi.org/10.1016/j.erap.2018.02.001

Reddin, E. (2021). *A spike in cheating since the move to remote?* https://www.insidehighered.com/news/2021/02/05/study-finds-nearly-200-percent-jump-questions-submitted-chegg-after-start-pandemic

Rigby, D., Burton, M., Balcombe, K., Bateman, I., & Mulatu, A. (2015). Contract cheating and the market in essays. *Journal of Economic Behavior & Organization, 111*, 23-37. doi: 10.1016/j.jebo.2014.12.019.

Rogerson, A. (2017). *Detecting contract cheating in essay and report submissions: Process, patterns, clues and conversations.* https://ro.uow.edu.au/cgi/viewcontenttttpsredir=1&article=2344&context=buspapers

Rudolph, J., Tan, S., & Tan, S. (2023a). ChatGPT: Bullshit spewer or the end of traditional assessments in higher

education?. *Journal of Applied Learning and Teaching, 6*(1), 342-363. https://doi.org/10.37074/jalt.2023.6.1.9

Rudolph, J., Tan, S., & Tan, S. (2023b). War of the chatbots: Bard, Bing Chat, ChatGPT, Ernie and beyond. The new AI gold rush and its impact on higher education. *Journal of Applied Learning and Teaching, 6*(1), 364-389. https://doi.org/10.37074/jalt.2023.6.1.23

Rundle, K., Curtis, G. J., & Clare, J. (2019). Why students do not engage in contract cheating. *Frontiers in Psychology, 10*, 2229.

Sharma, P., & Maleyeff, J. (2003). Internet education: Potential problems and solutions. *International Journal of Educational Management, 17,* 19–25. https://doi.org/10.1108/09513540310456365

Singh, S., & Remenyi, D. (2016). Plagiarism and ghostwriting: The rise in academic misconduct. *South African Journal of Science, 112*(5-6), 1-7.

Slade, C., Rowland, S., & McGrath, D. (2019). Talking about contract cheating: Facilitating a forum for collaborative development of assessment practices to combat student dishonesty. *International Journal for Academic Development, 24*(1), 21-34.

Tauginienė, L., & Jurkevičius, V. (2017). Ethical and legal observations on contract cheating services as an agreement. *International Journal for Educational Integrity, 13*(9), 1-10. DOI 10.1007/s40979-017-0020-7

The Quality Assurance Agency for Higher Education (QAA). (2020). *Contracting to cheat in higher education.* https://www.qaa.ac.uk/docs/qaa/guidance/contracting-to-cheat-in-higher-education-2nd-edition.pdf.

Tran, T. K., Dinh, H., Nguyen, H., Le, D. N., Nguyen, D. K., Tran, A. C., ... & Nguyen, T. A. (2021). The impact of the COVID-19 pandemic on college students: An online survey. *Sustainability, 13*(19), 10762. https://doi.org/10.1007/s10805-012-9150-y

Trezise, K., Ryan, T., de Barba, P., & Kennedy, G. (2019). Detecting contract cheating using learning analytics. *Journal of Learning Analytics, 6*(3), 90-104. http://dx.doi.org/10.18608/jla.2019.63.11

Wang, Y., & Xu, Z. (2021). Statistical analysis for contract cheating in Chinese universities. *Mathematics, 9*(14), 1684. https://doi.org/10.3390/math9141684

Wallace, M. J., & Newton, P. M. (2014) Turnaround time and market capacity in contract cheating. *Educational Studies, 40*(2), 233–236, https://doi.org/10.1080/03055698.2014.889597

Williamson, M. (2019). Contract cheating and academic integrity in higher education: What can universities, governments and quality assurance agencies do to understand, prevent and respond to the challenge?. *Kuwait International Law School Journal, Special Supplement, 4*(1), 219-274.