

ORIGINAL ARTICLE

Open Access



Academic integrity in the Muslim world: a conceptual map of challenges of culture

Akbar Akbar^{1,2*}  and Michelle Picard^{2,3}

* Correspondence: akbarakbar@iainpalopo.ac.id; akbar@uon.edu.au

¹Institut Agama Islam Negeri Palopo, Kota Palopo, Sulawesi Selatan, Indonesia

²The University of Newcastle, Newcastle, Australia

Full list of author information is available at the end of the article

Abstract

The literature suggests that a whole-institution culture of academic integrity is needed in order to prevent academic integrity breaches. It is also suggested that the national cultures and individual backgrounds of academic staff and students can impact on their propensity to breach academic integrity policies and on their uptake of initiatives aimed at enhancing academic culture. Much research has been conducted on academic integrity related to culture in the western world including the behaviours of international students, and some work has been conducted in various Asian contexts. However, little is known about how national culture and religion affect academic integrity in eastern countries with a Muslim majority. This paper presents a synthesis of the literature related to academic integrity and culture in regions where Muslims are the majority. An integrative literature review was carried out. Keywords were used to search and to collect academic integrity related research published from 2010 to 2020. The literature reviewed revealed that academics in countries with a Muslim majority faced challenges related to their local cultures, which included social and religious perceptions and practices. However, they were also able to draw upon some national and religious practices that supported and enhanced academic integrity. This paper concludes with recommendations for incorporating these positive cultural factors into an academic integrity framework for policy and practice appropriate for Muslim contexts.

Keywords: Academic integrity, Muslim world, Culture

Introduction

Recent studies have shown that the creation of a culture that includes ethical values at all levels of higher education is central to maintaining academic integrity (Bretag & Mahmud, 2016; Gow, 2014; Morris & Carroll, 2016). Scholars such as Morris and Carroll (2016) contend that the greatest impact on student's behaviour is achieved if a culture of academic integrity is fostered through practical experiences in a supportive learning environment. This is within a learning environment that holistically addresses unethical practices and is relevant to the local context. While some research has explored institutional and national cultures and practices that are detrimental to academic integrity (e.g. Kutieleh & Adiningrum, 2011), these studies have focussed on international students in western contexts. Little to date has



© The Author(s). 2020, corrected publication 2020. **Open Access** This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>. The Creative Commons Public Domain Dedication waiver (<http://creativecommons.org/publicdomain/zero/1.0/>) applies to the data made available in this article, unless otherwise stated in a credit line to the data.

focussed on institutions in the Muslim world and the relationship between national and institutional culture, and academic integrity within these specifically Muslim higher education contexts.

Bretag and Mahmud (2016) developed their framework for policy and practice to institutionalise a culture of academic integrity. It shifts the emphasis from punishments for breaches of academic integrity towards prevention and education. The framework includes academics as 'champions' promoting academic integrity among students and staff. Another supporting practice involves students as active promoters of academic integrity. There is a growing body of research on academic integrity with some studies exploring institutional and national cultures and practices that are detrimental to academic integrity. Other studies have contrasted the academic cultures of the West and East (e.g. Kutieleh & Adiningrum, 2011) and suggested that international students in western universities commit more breaches than domestic students due to language challenges as well as differential cultural norms and practices. Bretag et al. (2011) identified two critical areas for institutional action. Firstly, more support systems/mechanisms should be developed for supporting vulnerable student groups including those who use English as an additional language (EAL) and those who are educationally 'less prepared' or struggle to understand the concept of academic integrity without sufficient assistance. Secondly, lessons about exemplary academic integrity policies and support frameworks should be extended and further implemented at higher education institutional level.

Much of the research mentioned above has been conducted on academic integrity related to culture in the western world including the behaviours of international students, and some work has been conducted in various Asian contexts. However, little is known about how national culture and religion affect academic integrity in eastern countries with a Muslim majority. This paper attempts to present a synthesis of the literature related to academic integrity and culture in regions where Muslims are the majority and therefore aims to address this gap in knowledge by:

- Outlining key literature on the culture of academic integrity among higher education institutions in the Muslim world;
- Synthesising literature on cultural challenges related to maintaining and developing academic integrity among higher education institutions in the Muslim world; and
- Highlighting existing problems being confronted and proposing strategies that can be implemented.

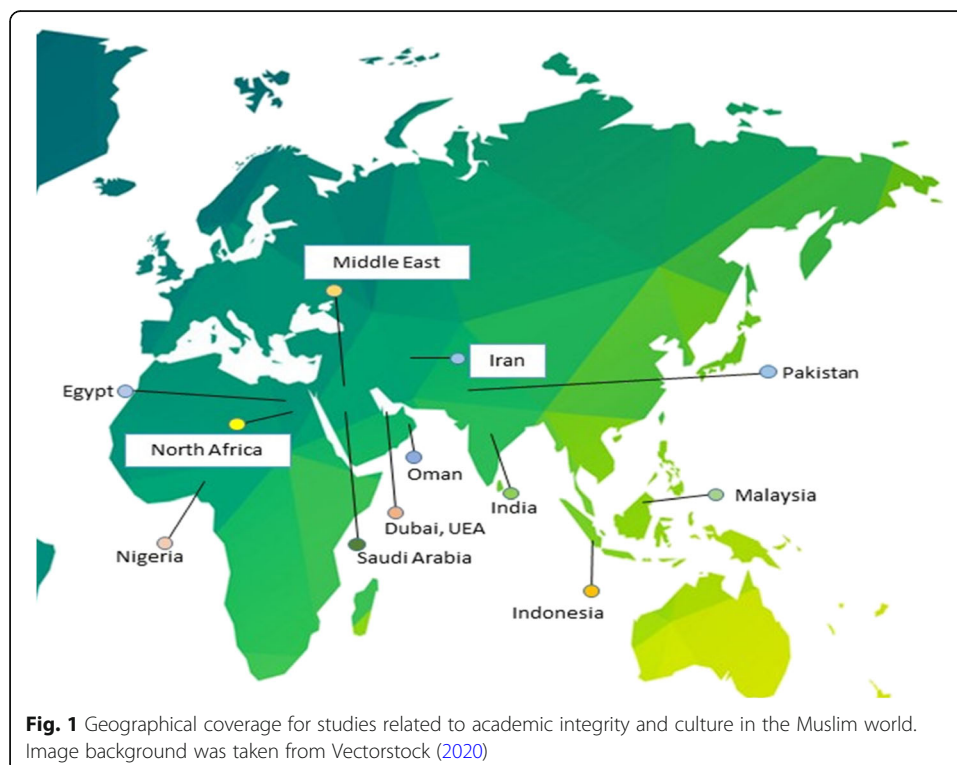
Approach to the literature review

This study presents a synthesis through an integrative review of the key literature (journal articles from 2010 to March 2020) dealing with academic integrity in the Muslim higher education context. Since this study is concerned with a fairly new area, there was limited experimental studies available in our initial library search and we decided that a broad range of literature needed to be consulted. Hence, we selected an integrative review as the methodology for this study, since integrative reviews commonly include non-experimental research as well as practice applications, and theory papers in their analysis (Whittemore & Knafl, 2005, pp. 546–553). It aimed to focus on higher

education institutions in the Muslim world and on literature that describes academic culture and attempts to enhance academic integrity in these contexts. It is argued, from a socio-cultural lens that the notion of academic integrity is a western construct. A socio-cultural lens views knowledge as continually constructed in a social context and emphasizes the importance of ‘co-constructing’ meaning from within socially framed activities (Vygotsky 1978). However, while cultural beliefs and considerations are an integral part of this paper, the question of whether academic integrity should, in fact, exist outside the western world or has universal validity, has not been discussed in this paper. The perspectives on academic integrity in this paper are directly those of the authors of the literature cited. The decision to focus on cultural considerations relating to academic integrity is based on: the authors position on academic integrity; current global research dissemination; the existence of a large cohort of international students; the incidences, identification and consideration of academic breaches in the Muslim world; and the stated scope of this paper.

Criteria for selecting research

Before we define what we meant by the Muslim world, it would be instructive to identify which countries had large populations of Muslims, or followers of Islam. To this end, a list of countries with a majority of Muslims from www.worldpopulationreview.com (World Population Review, November 05, 2019) was used as the foundation to select the countries of origin for the journal articles selected (please refer to Fig. 1). Although India does not have a Muslim majority, certain regions of the country have a Muslim majority and 11% of the world’s Muslim population reside in India. Hence



articles from India were also included. In addition, there are a number of Islamic higher education institutions in this country. We used this list along with key words related to academic integrity to initially scope the literature and context. We also selected articles from the countries that discussed academic culture and, more specifically, academic integrity culture. In addition, we explored articles in those countries related to higher education institutions and their practices that might relate to academic integrity. We included all relevant journal articles including conceptual papers and those with qualitative and quantitative research designs.

Geographic locations of academic integrity culture literature

The identified literature had a relatively broad geographic spread across the Muslim world with papers identified originating from one North African country and one West African country (Egypt and Nigeria), four Middle Eastern countries (United Arab Emirates, Sultanate of Oman, Saudi Arabia and Iran), and four Asian countries (Malaysia, Pakistan, India and Indonesia). Indonesia and the UAE had the highest number of country-specific papers (four and three respectively), while Malaysia and Pakistan also each had two country-specific papers. However, articles from Malaysia and Saudi Arabia were considered important as they focused on the Muslim world in General. This geographical concentration does not seem related to the prevalence of academic integrity breaches in these countries, but rather to the fact that academics within these countries have chosen to study the phenomenon. For this reason, this paper emphasises conceptual rather than geographical mapping of academic integrity literature related to culture in the countries as listed in the table and visualised in the figure below (Table 1):

Table 1 A list of countries and selected literature of Academic integrity in the Muslim World

Countries with the Majority of Muslims	Recent Academic Integrity and Culture Literature Presented in These countries
• Egypt	<i>Abou-Zeid, 2016</i>
• Nigeria	<i>Orim, 2016</i>
• United Arab Emirates	<i>Fantazy & Al Athmay, 2014</i> <i>Abdel-Hadi, 2017</i> <i>Abdulrahman, Alsalehi, Husain, Nair & Carrick, 2017</i>
• Sultanate of Oman	<i>Nahar, 2018</i>
• Saudi Arabia	<i>Abdulghani et al. 2018</i>
• Iran	<i>Ghazinoory, Ghazinoori & Azadegan-Mehr, 2011</i> <i>Ebadi & Zamani, 2018</i>
• Indonesia	<i>Adiningrum, 2015</i> <i>Siaputra and Santosa, 2016</i> <i>Maimunah, Herizal, Mukminin, Pratama & Habibi, 2018</i> <i>Akbar & Picard, 2019</i>
• Malaysia	<i>Quah, Stewart & Lee, 2012</i> <i>Imran & Nurdin, 2013</i> <i>Moten, 2014</i> <i>Cheah, 2016</i> <i>Ismail & Yussof, 2016</i> <i>Sahad & Asni, 2018</i>
• India	<i>Mohanty, 2016</i> <i>Pallavi & Kaushal, 2017</i>
• Pakistan	<i>Shukr & Roff, 2015</i> <i>Mansoor & Ameen, 2016</i>
• MENA Region	<i>Cinali, 2016</i>

Selection procedure for collection of the literature

We applied several strategies for the collection of relevant articles. We first reviewed the Handbook of Academic Integrity (Bretag, 2016) to identify key articles on academic integrity written in the context of countries with a majority of Muslims or large Muslim populations. The reason for this was that the Handbook is a definitive text in the field of academic integrity. In addition to this strategy, database-based searching was carried out using specific education databases (Proquest and Academic Search Ultimate or EBSCO Host).

We selected a number of key words and combinations of keywords in order to scope a large number of literature within the databases (Dzomeku, Van Wyk, & Lori, 2019). The keywords were as follows:

- Academic Integrity AND Islam
- Academic integrity AND Islamic culture
- Academic integrity AND Muslims
- Academic integrity and Muslim Culture
- Academic misconduct AND Islamic culture
- Academic misconduct AND Muslim culture
- Plagiarism AND Islam, Cheating AND Islam (higher education)
- Plagiarism AND Muslim, cheating and Muslim
- Academic integrity AND Islamic university

Criteria for inclusion and exclusion

All included texts for this integrative review were peer-reviewed scholarly articles with full text availability in the databases. We limited the search scope to the higher education context. In the searching process, the subject was set to “higher education or college and universities” so that the coverage was set within this scope. We limited our search to articles published in English because the majority of the articles discussing culture in academic integrity in the Muslim world and published for global audiences are written in English.

Key literature identified and discussion

Our initial searches in *the Handbook of Academic Integrity* resulted in 6 relevant book chapters that explore the issues of academic integrity in countries with a majority of Muslims. We searched for relevant literature in the two databases by first conducting a preliminary review by analysing the title, abstract and contexts of the articles. Our preliminary review of relevant articles in the databases resulted in a collection of 49 articles. Among these collected articles, 7 articles were found in EBSCO Host and 42 articles in Proquest. Duplicates of articles were deleted and further reviewed by applying the inclusion and exclusion criteria, resulting in 18 relevant articles. In total, 24 academic articles or chapters were critically reviewed for the synthesis of the literature of academic integrity and culture in a number of Muslim countries.

Key topics related to the academic integrity concept and culture

Studies in the western context that talk about international students suggest that replication of the work or words from a great expert/an authoritative textbook is understandable in some educational settings. For example, Cinali (2016), suggest that in Islamic culture society, the more closely the replication is, the greater the mastery of the subject is demonstrated to be and that in Islamic culture, a learned person is distinguished by their ability to accurately use the *Qu'ran* citation and the commentaries of the *Ulema* (Muslim scholars recognised for their knowledge of the scriptures). Bamford and Sergiou (2005, p.18) likewise note that “some African students felt copying from books was expected at school but “couldn't understand teachers' ‘obsession’ with discovering their sources of information”. As in the western literature described above, the studies related to culture and academic integrity in Muslim majority countries, we identified, appeared to predominantly focus on student misconduct. They also appeared to take western-focussed definitions of common student misconduct and reflected similar attitudes towards this misconduct as is reflected in western contexts. For example, the authors expected students to avoid copying or imitating without appropriate acknowledgement. Equally, borrowing other's work, reusing other's words or ideas intentionally passing others' work off as your own was viewed as problematic. Some of the literature we identified related to academic integrity (e.g., Abdel-Hadi, 2017; Abdulghani et al., 2018; Abdulrahman, Alsalehi, Husain, Nair, & Carrick, 2017; Shukr & Roff, 2015) separates plagiarism and cheating, other scholars believe that cheating and plagiarism cannot be separated and explore the two interrelated academic breaches in their contexts (e.g., Abou-Zeid, 2016; Cinali, 2016; Mohanty, 2016; Orim, 2016).

We found eight studies that explored cheating as a stand-alone academic integrity breach among students and academics. Four studies explore the prevalence of cheating behaviours among students and found that this type of academic dishonesty remains extremely common (Abdel-Hadi, 2017; Abdulghani et al., 2018; Abdulrahman, Alsalehi, Husain, Nair, & Carrick, 2017; Shukr & Roff, 2015). Two studies focus on finding solutions for student cheating by examining the potential of drawing on Islam to combat cheating. One of these (Fantazy & Al Athamay, 2014) focuses on the link between Islamic ethics and academic ethics thus taking a slightly different approach to the western literature. The second explores the efficacy of a cheating prevention program that instilled a sense of guilt, punishment and social stigma that drew on religious values in an attempt to reduce cheating among students (Ismail & Yussof, 2016). Hence, like Bretag and Mahmud (2016), this study attempts to create a culture of academic integrity, but uses religious values as a source of the culture. Both studies report a decrease in cheating and an increased awareness of ethical behaviours due to their interventions.

Two of the studies on cheating also highlight new challenges beyond traditional student-focussed views of cheating in exams. For example, one study highlights the issue of predatory journals as a potential cheating behaviour among academics and research students (Ebadi & Zamani, 2018). The predatory journals are cheating academics and students who are desperate to publish in international outlets luring them with websites that copy those of high-impact journals. However, some students and academics actually chose to publish in predatory journals to avoid rigorous peer review and obtain an easy publication in order to fulfil scholarship requirements or gain

academic positions. Ebadi and Zamani (2018) describe what they call *symbolic violence* (Bourdieu, 1991) where professors are pressurised to publish, and they transfer this pressure to their students. Perhaps this is because academics in Muslim majority countries with English as an additional language are increasingly experiencing pressure to produce high-impact publications in international journals in the medium of English. For example, the Indonesian higher education system for professorial promotion compulsorily requires first-author publication in high-ranked Scopus indexed journals. This level of publication is also increasingly becoming necessary for promotion from lecturer to Associate Professor. Another paper (Sahad & Asni, 2018) highlights the practice of *free-riderism* which also arises due to academic pressures to publish. The authors use the term to describe a range of practices including ambiguous behaviours where academics allow others to do most of the work, but still claim authorship to *gift authorship* where scholars add the names of others not directly involved in a paper to blatant cheating in the form of *ghost writing* where someone writes on behalf of another again in response to the pressure to publish.

Despite an increasing emphasis on other forms of cheating as highlighted in the eight papers described above, the vast majority of papers we reviewed on academic integrity culture in Muslim majority countries focus on plagiarism even when other topics are also addressed. Perhaps this emphasis is due to some high-profile cases in Muslim majority countries where academics have been exposed in the media as plagiarising other scholar's work, for example, as reported in the Indonesian context (Siaputra & Santosa, 2016). Definitions of plagiarism appear to be similar to those used in western contexts. The emphasis on plagiarism could also be because a number of studies report rampant plagiarism among students, lecturers and professors (Mogra, 2017; Moten, 2014; Siaputra & Santosa, 2016). We found ten papers focussing exclusively on plagiarism. However, despite the prevalence among all levels of the academy, the papers on prevention of plagiarism tend to focus on plagiarism detection and prevention amongst students with only one of these papers exploring the perspectives of researchers including students and staff. Perhaps the reason for this focus on students is the desire to prevent academic integrity breaches as early as possible as part of an educative approach (Mohanty, 2016; Orim, 2016).

Two papers in the Indonesian context focused on plagiarism policy. One of these focuses on defining plagiarism versus other academic integrity breaches and reviews plagiarism policy with the aim of designing an effective anti-plagiarism campaign (Siaputra & Santosa, 2016). The other paper (Akbar & Picard, 2019) reviews plagiarism policy from national to institutional level to understand how plagiarism is communicated across different layers of authority in Indonesian higher education. Both of these papers suggest the importance of identifying levels of plagiarism (e.g. intentional and unintentional plagiarism) and an educative approach and sanctions appropriate to the level of the breach. One study (Adiningrum, 2015) investigates types of plagiarism among students and staff and their preventive measures.

Some papers focus on specific cohorts of students or the roles of staff in combatting student plagiarism. For example, one paper investigates perceptions of student teachers in Islamic religious higher educations in Indonesia and suggests that many students in this cohort do not fully understand plagiarism (Maimunah, Herizal, Mukminin, Pratama, & Habibi, 2018). Another paper looks into the role of libraries in combatting

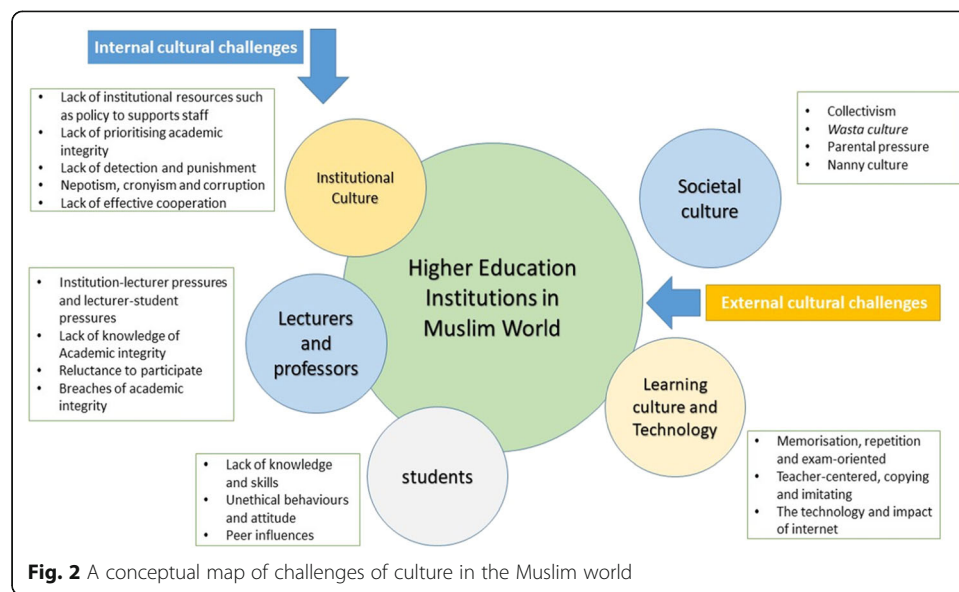
plagiarism at Pakistani universities and found that they do not effectively support the war against plagiarism (Mansoor & Ameen, 2016).

Another emphasis in the plagiarism papers was on the impact of beliefs and attitudes. For example, Malaysian researchers investigate the psychological motivations behind plagiarism (Imran & Nordin, 2013), and what Malaysian researchers feel about colleagues that plagiarise (Cheah, 2016). Another study examines the impact of a deeper understanding of Islam on adherents avoiding plagiarism (Quah, Stewart, & Lee, 2012). These studies suggest that students continue to believe that they will escape punishment for plagiarism and that religious understanding does not necessarily prevent plagiarism perhaps because students (and even academic staff) do not make a link between religious ethics and expected behaviours and ethical behaviour in relation to their studies and publication. Another researcher explores plagiarism from a historical perspective and suggests that a history of colonisation and anti-Western sentiment might be one of the reasons preventing students and academics from linking between religious and academic ethics since they might view constructs of plagiarism as part of a western and foreign way of being (Ghazinoory, Ghazinoori, & Azadegan-Mehr, 2011). One study focuses specifically on plagiarism in the Muslim world and explores how the Holy Qur'an, the hadiths and, attitudes and behaviours of key Islamic scholars in history responded towards plagiarism in order to prevent academic breaches from a religious perspective and also explores the higher education practices of addressing plagiarism in the Muslim world (Moten, 2014). Therefore, although as noted above, definitions of plagiarism remain consistent with that in the western world, a number of the studies in Muslim-majority countries reflect on local attitudes to plagiarism and local responses to preventing this form of academic misconduct.

Six studies explore academic integrity and culture more broadly including plagiarism, cheating and all other categories of breaches. Four studies explore challenges to upholding academic integrity. These studies demonstrate that academic integrity breaches cannot be viewed in isolation, but are impacted by prior education, the education system as a whole as well as attitudes in society in general (Abou-Zeid, 2016; Cinali, 2016; Mohanty, 2016; Orim, 2016). The other two studies investigate student perceptions of ethics and moral values in general and whether these are consistent with their attitudes towards their studies (Nahar, 2018; Pallavi & Kaushal, 2017). The following section of the review focuses on the cultural challenges amongst students and staff, organisational challenges and national challenges as these are themes repeatedly discussed in the literature of academic integrity in the Muslim world as suggested by Moten (2014).

Mapping the challenges of culture of academic integrity in the Muslim world

To help visualise the broad challenges of culture in the context of the Muslim world, a conceptual map is presented in the figure below (Fig. 2). Unlike geographical mapping, it is possible to conceptually map the influence of culture on academic integrity in higher education in the Muslim world. Figure 2 below shows that internal higher education cultural challenges related to the institution, faculty and students as well as external broader societal culture related to learning, parents and societal values more broadly affect the culture of academic integrity.



Challenges impacting academic integrity among students

Some scholars who study academic integrity breaches in countries with a majority of Muslims are concerned that academic integrity breaches are widespread amongst students not only in higher education but also starting in secondary and even primary education (Abdulghani et al., 2018; Abou-Zeid, 2016). Students appear to lack the knowledge and skills and supportive environment to empower them to develop a culture of academic integrity. Peer pressure and the lack of collective awareness or peer support are contributing factors to academic integrity breaches.

In terms of skills, the research reveals that general academic skills and knowledge of academic culture in academic writing, time management, critical thinking, creativity and respect for originality impact on the culture of academic integrity (Cinali, 2016; Orim, 2016; Shukr & Roff, 2015). Scholars and higher education practitioners report feeling overwhelmed that after decades of studying and promoting academic integrity many students still perceive plagiarism, cheating and collusion as acceptable, or not serious and/or did not understand what constituted an academic integrity breach (Abdulrahman et al., 2017; Cheah, 2016; Imran & Nordin, 2013; Maimunah et al., 2018; Moten, 2014).

Most of the literature exploring the role of religion and/or Muslim culture on a culture of academic integrity for students emphasises the negative impact or lack of impact. For example, one study attempted to draw on religious teaching to combat academic integrity breaches but found that it generally had no significant influence on student attitude (Quah et al., 2012). However, this study has limited reliability since it explored a context with only 28.8% Muslim students. Another study emphasises the relationship between religious and other cultural factors and negative student peer pressure to respond collectively and support each other and with an attitude that knowledge belongs to everyone (Cheah, 2016). One study showed that students help one another to survive the challenges of academia, including, unfortunately, cheating in exams, sharing assignments with others and allowing friends to copy answers, signing for friends' attendance, and finding previous assignment for others to copy (Shukr &

Roff, 2015). Because of these practices arising from collectivist attitudes, academic breaches including plagiarism are accepted as a norm (Abou-Zeid, 2016). Students who report breaches or refuse to assist others to cheat experience social isolation (Nahar, 2018) and therefore students are reluctant to report breaches and according to Abdulghani et al. (2018) this reluctance is one of the main causes of ineffective detection of academic integrity breaches.

As students fail to draw the link between their religious ethics and morality when interacting in an academic environment (Pallavi & Kaushal, 2017), they are likely to be impacted by negative influences in their social environment (Abdel-Hadi, 2017). Only one study shows a clear link between religious values and academic integrity values. Fantazy and Al Athamay (2014) found in their study that there is a positive correlation between the likelihood of demonstrating ethical behaviour and their understanding of Islamic values. They found that understanding Islamic values and educational ethics had a significant effect on ethical behaviours among students. The study also found that explicitly unpacking and explaining ethical behaviours, and how they related to ethical values and behaviours in Islam, was more important than the understanding of Islamic values in isolation. The importance of being explicit is also highlighted in a number of other studies. For example, Nahar (2018) shows that it is important for students to explicitly understand unethical behaviour such as plagiarism and cheating before they are able to understand ethical academic integrity behaviour. Nahar (2018) further shows that while a group of students understood that bribery was sinful in accordance to Islamic teaching and therefore understood that it was prohibited, they failed to understand that plagiarism and ghost-writing were unacceptable as well. Other studies also emphasise the importance of explicitly labelling negative academic behaviours (Abdulghani et al., 2018; Adiningrum, 2015; Orim, 2016; Shukr & Roff, 2015).

Cultural challenges of maintaining academic integrity among faculties

A culture of ethical behaviour and academic integrity among faculty is essential to communicate academic integrity expectations to students and to develop an institutional vision and culture of academic integrity. However, academic integrity breaches have become common at some universities in Muslim majority countries. Widely reported breaches among academics range from inappropriate referencing and paraphrasing, to data manipulation, data fabrication and faked research (Adiningrum, 2015; Hoodbhoy, 2013 as cited in Moten, 2014). It is important to curb academic misconduct among lecturers so that they are positive role models for students. A number of studies suggest that faculty in Muslim majority countries are reluctant to actively address academic integrity breaches. Enforcing academic integrity with their students and building a positive institutional culture are not a priority for institutions they serve and students they educate. This is because they may be considering themselves inappropriate academic integrity role models.

Cheah (2016) contends that academics find the task of teaching students academic integrity and following up on breaches too onerous. This is in line with Maimunah et al. (2018) and Moten (2014) who explain that this perception is flawed since minimal effort is required to teach and promote academic integrity if a systematic approach is taken. However, the other possible factor for faculty's reluctance to teach academic

integrity and participate in the detection of academic integrity breaches is their own lack of knowledge of academic integrity. Some studies have suggested that while many lecturers understand the concept of plagiarism, they are uncertain about the difference between ethical and unethical behaviours (Mohanty, 2016) and therefore, lack knowledge of the importance of maintaining academic integrity (Adiningrum, 2015). They also failed to understand more complex breaches such as self-plagiarism and how to effectively use text-matching tools to detect academic breaches such as plagiarism (Adiningrum, 2015). Because of their own breaches and lack of understanding of academic integrity, academics are unable to communicate institutional expectations or contribute to building an institutional culture of academic integrity.

Institutional related cultural challenges

Higher education institutions can also play a fundamental role in creating a culture of academic integrity and impact on the attitudes of staff and students who in turn impact on the attitude of others in the institution. Unfortunately, national reputation and rank of the university does not guarantee the absence of the scandals and academic integrity breaches (Moten, 2014) and a proactive approach is required at all institutions. Policy plays an important role in the prevention and eradication of academic integrity breaches since it provides clear guidelines and empowers actions to prevent breaches. However, the literature suggests that there is a lack of academic integrity policy in some Muslim majority countries and institutions. For example, Moten (2014) found an absence of plagiarism policy in most universities in Bangladesh, Pakistan, and India, while Orim (2016) found it similarly lacking in Nigeria and honour codes in Pakistan also lack detail and emphasis on academic integrity (Shukr & Roff, 2015). The result of a lack of policy is a lack of emphasis on academic integrity. However, even where academic integrity policies such as plagiarism prevention policies exist, research suggests that they are not always accessible or promoted among faculty and students (Adiningrum, 2015). Visible and enacted policy is particularly important to empower and protect subordinates to act when their seniors behave in ways that lack academic integrity.

Our analysis found that higher education institutions, in countries with the majority of Muslims, suffered from lack of institutional resources to empower academics in curbing academic integrity breaches among students. For example, Maimunah et al. (2018) contend that several Indonesian universities including Islamic Higher Education institutions do not utilise text-matching tools due to their expensive pricing and limited available budget within their institutions. Consequently, without text-matching tools, faculty manually assess students' academic writing, dependent on their intuition and gut-feeling (Adiningrum, 2015). Due to the high numbers of students in classes, manually assessing substantial numbers of essays and papers page by page becomes too onerous for staff and they are driven to turn a blind eye to breaches.

Even when academics manually detect academic integrity breaches, a lack of consistency in determining the level of breach and appropriate sanctions and a culture of leniency towards breaches results in academics avoiding imposing penalties (Adiningrum, 2015; Akbar & Picard, 2019). Thus, researchers suggest clear deterrents and punishments for academic integrity breaches such as plagiarism (Cheah, 2016; Moten, 2014).

Unfortunately, consistency in detection and punishment for staff and student academic integrity breaches has become challenging in many universities in the Muslim world due to a culture of nepotism and cronyism (Cinali, 2016). Within such environments, certain parties are treated as immune and even untouchable. Cinali (2016) believes that at a number of Muslim majority institutions top-level managers have power beyond other authorities that enable them to revise policies without approval of other stakeholders and sanctions for breaches are unequally applied. The vicious cycle of nepotism (called *Wasta culture* in Saudi Arabia), cronyism and corruption are observable across institutional practices from admission processes, final assessment of student learning, to trading of degrees and certificates (Abou-Zeid, 2016; Cinali, 2016). In contrast to the lack of standards revealed by nepotism and cronyism, strictness in upholding academic standards can result in some faculty and students being forced into academic integrity breaches as a survival technique (Cinali, 2016, p. 117). Adiningrum (2015) found that some faculty who were overseas graduates placed excessive pressure on their research students expecting high standards of publication without support. Some of these faculty were labelled strict and *killer-lecturer* as they tried to transfer the principles and practices related to academic integrity over from the International universities they graduated from to the local context.

Equating academic integrity culture with western ideologies can result in a reaction against associated expectations. Ghazinoory et al. (2011) in their analysis of academic integrity in Iran from a historical perspective reveal that anti-west sentiment as a result of the United States of America involvement in the war between Iran and Iraq promoted a resistance to all aspects of American culture. This ranged from access to publications in English to academic culture including academic integrity. Besides a rejection of western culture, an after effect of the tensions between the USA and Iran is a lack of academic English proficiency among academics. With the recent pressure on Iranian academics to publish in international English-medium outlets, there is increased temptation to copy-paste and plagiarise to ensure quick publication. This pressure to *publish or perish* is also an issue in other Muslim majority countries where academics and students lack sufficient academic English skills and international publication experiences but at the same time face unrealistic workload pressures and publication expectations such as international publication requirements for doctoral students and requirements for international publication in high impact factor journals for staff promotion (Ebadi & Zamani, 2018; Ghazinoory et al., 2011; Moten, 2014). They are consequently prone to resort to ghost-writers and in turn pressurise their students to plagiarise and be cheated by predatory journals (Ebadi & Zamani, 2018; Ghazinoory et al., 2011; Maimunah et al., 2018; Moten, 2014; Sahad & Asni, 2018). Support from higher education institutions in terms of publication and learning support for students and staff are required to lessen these tensions. However, Ebadi and Zamani (2018) report that a significant percentage of their respondents (34.6%) experience a lack of funding, facilities and equipment for research, fuelling other pressures such as financial pressures because students, for example, need to budget tuition fees and publication costs at the same time.

From our review we found that another challenge faced by universities in Muslim majority countries is a lack of cooperation within different parts of an institution, across institutions and between universities and government departments, such as

Ministries. For example, libraries are not effectively designed and utilised for helping detection of academic integrity breaches and providing resources to help students and staff avoid plagiarism (Cinali, 2016; Mansoor & Ameen, 2016). Libraries tend to be traditionally viewed as merely a place for book borrowings and therefore, the authorities cannot identify the potential for involving libraries to cooperate with academic staff and central services in addressing academic integrity breaches. Another example of a lack of cooperation within institutions is the fact that despite the provision of plagiarism policy by university rectors, the translation of these policies into faculty practice is not consistent across different schools or disciplines at many institutions (Adinigrum, 2015). This difference causes inconsistent practices of handling academic integrity breaches. Furthermore, understanding of the importance of creating ethical environments to maintain academic integrity and of the importance of academic integrity itself are differently perceived among academia. These differences and lack of understandings of academic integrity pose challenges for collective action against academic misconduct (Abou-Zeid, 2016) and faculty cannot address plagiarism and cheating among students because of the absence of explicit responsibilities and clear procedures to combat academic misconduct (Orim, 2016). Akbar and Picard (2019) in their study of plagiarism policy across different levels of authorities: from the president to the rector found that the communication across these authorities to define plagiarism potentially cause confusion because the concept of intentional and unintentional plagiarism is not further clarified at the university level. A dilemma for cooperation is also found in Ministerial level. In the Indonesian higher education system to file plagiarism allegation, the Ministry of Education has given the authority to lodge an allegation of plagiarism to the courts, but not the Ministry of Religious Affairs (Adinigrum, 2015). Thus, policy makers need to ensure shared responsibility and uniformity in their understanding of the importance of academic integrity across different institutions for effective institutional actions against academic integrity breaches.

Cultural challenges of maintaining academic integrity related to education

Beyond the individual student and faculty level and the specific context of higher education, the context of education more broadly in Muslim majority countries also impacts on the development of an academic integrity culture. Learning experiences are vital to build positive attitude and ethical behaviours to maintain academic integrity. In the Muslim world, however, some scholars have even suggested that it is the methods of religious and traditional learning that are heavily reliant on memorization, repetition and exam-oriented assessment themselves that undermine critical thinking, creativity and originality and lead to breaches of academic integrity (Abou-Zeid, 2016; Cinali, 2016; Maimunah et al., 2018). Cinali (2016) points out that memorizing and repetition are commonly found in passing down knowledge from teachers to students in folk and Islamic religious learning and that these practices are hindrances to creative and innovative thinking, because students are constrained to using the learning styles preferred by their teachers. It is not culturally accepted to change sacred texts and the statements of Islamic scholars. This practice poses challenges for students to adapt the concept of paraphrasing, synthesising and conventions of academic writing promoted by Western concepts (Cinali, 2016). This is echoed by (Cheah, 2016) who states that

students' previous learning experiences do not prepare students for international education so that it is difficult for the students to quickly adapt with academic life when studying abroad.

The roles of teachers and students in traditional perspectives of education in the Muslim world can also have an impact on the culture of academic integrity. Some scholars suggest that traditional teacher-centred classrooms encourage copying and imitating teachers as the centre of knowledge, leading to a lack of critical thinking (Orim, 2016). Challenging the opinions of teachers, and even professors as the centre of knowledge, is then regarded as breaking the norms because the teachers and professors should be positioned in a higher hierarchy of social status than students (Cinali, 2016) and must be respected as parents. In higher education contexts, many researchers believe that plagiarism, cheating and collusion in universities are the after-effect of previous education experiences (Abou-Zeid, 2016; Mohanty, 2016; Orim, 2016). For example, some students fail to understand plagiarism, fabrication and falsification because of an exam-oriented education system that prioritises prohibition of cheating (Orim, 2016) and rarely emphasises plagiarism as an unethical behaviour. Cheating focused prevention results in misconception of cheating among the students, as a breach of academic integrity, but not plagiarism. Furthermore, the internet can be perceived to encourage and widen opportunities for plagiarism. This is due to commonly identified issues such as the availability of *copy-pasteable* materials and cheating and ghost-writing websites. However, in the Muslim world, there is also the problem that, a substantial number of Islamic web-based information and official websites contain plagiarism (Moten, 2014). This prevalence of plagiarism materials in culturally valued sources can promote the misconception that plagiarism is acceptable among students.

Cultural challenges from societal attitude and Behaviours

The attitudes and behaviours of students and academics related to academic integrity in higher education are also shaped by the society where they live because learning moral behaviours and understanding ethics are heavily reliant on interacting with society and observing the society's behaviours (Abdel-Hadi, 2017). The societal view of culturally acceptable and unacceptable behaviours, in accordance with social and religious norms, shape academic behaviours in higher education institutions. Collectivism found in some Muslim countries (Abou-Zeid, 2016; Cinali, 2016), for instance, obscures the concept of intellectual property (Adiningrum, 2015; Ghazinoory et al., 2011). Some Muslim scholars tend not to object if they are not accredited through citation because of their perception that their academic works belongs to society in general, because knowledge is God-given and therefore belongs to the public not individuals (Moten, 2014). The expectation, then is to gain divine rewards rather than worldly benefits. Furthermore, as mentioned earlier, a culture of power misuse dubbed *wasta* in Arabic can lead to nepotism (Cinali, 2016). This practice can widen opportunities for rule infringement throughout the institutional levels if this culture is practiced in the entire management of tertiary education. This cultural challenge is exacerbated by a lack of condemnation for plagiarism and cheating and a lack of support for academic integrity from within the students' social environment from parents, peers and teachers (Abou-Zeid, 2016). As a consequence, students and academics who demonstrate academic integrity may not gain rewards and incentives for academic

integrity from within their socio-cultural environment. Although goal-oriented education resulting in a degree and certificate is rewarded, this is not the case with process-oriented education focussing on skills and knowledge development (Orim, 2016). Students are encouraged, with incentives of class-status and respect from the society, to achieve certification. In some cases, this is without ensuring the ethics of gaining the knowledge by avoiding plagiarism and cheating. This is one of the reasons why Cinali (2016) again states that to some extent, cheating is generally viewed as a “survival” technique within certain parts of society.

Within Muslim society, parents play an important role for modelling and motivating morals and ethics to help avoid academic integrity breaches. The majority of Muslim countries can be characterised as credential-focused societies (Boundless.com, n.d.) in which degrees and certificates, among other factors such as wealth, are used for identification of social status. Thus, family in these societies encourage the young to obtain a degree to help upgrade their family status. With this societal pressure, parents as leaders of the family put pressures on the young to obtain degrees. Although these parents’ intentions and encouragement are positive to support family education, a misinterpretation of the encouragement can lead the young to commit academic integrity breaches. Research suggests parental attitudes and behaviours appear to be influencing factors of plagiarism and cheating (Abou-Zeid, 2016; Cinali, 2016; Fantazy & Al Athamay, 2014; Mohanty, 2016; Nahar, 2018). For instance, a nanny culture, which refers to house servants doing homework for the children of their employers, regularly occurs in middle to high class society and parental pressures among middle-low economic background parents who have not had the experience of university or higher level study themselves, undermine student ability for independent learning and tempt them to cheat, and become involved in contract cheating in their higher studies (Cinali, 2016). Parents also pressurise students to achieve higher grades without understanding the challenges and amount of study required, motivating students to breach academic integrity (Abou-Zeid, 2016; Cinali, 2016; Mohanty, 2016; Nahar, 2018). Abdulghani et al. (2018) found in his research that students living with family are more prone to cheating behaviours than those who live in campus accommodation with other students. Interestingly, Fantazy and Al Athamay (2014) contend that a heavy reliance of learning moral and ethics from religious values by merely observing family morals and behaviours do not translate to students applying ethics outside this context including ethics in higher education.

Summary of challenges and proposed strategies

As can be seen in the literature review above, there is a complex interplay between socio-cultural factors and agents impacting on academic integrity and misconduct in Muslim majority countries. In Table 2, we summarise the agents impacting on the culture, the related academic integrity breaches, challenges preventing a culture of academic integrity and possible solutions to the challenges and breaches as suggested in the literature.

Conclusion

This research has highlighted cultural challenges to maintaining academic integrity faced by university in countries where the majority of people are Muslims. At both

Table 2 Summary of challenges of culture in the Muslim World to promote academic integrity and proposed strategies

Agents within the Cultures	Breaches of Academic Integrity	Challenges	Suggestions from the literature
Students	Cheating in exams Sharing assignments with others Allowing friends to copy answers Signing for friends' attendance Finding previous assignment for others to copy Cheating Plagiarism Ghost-writing Bribery	Widespread academic integrity breaches in various levels of education (Abdulghani et al., 2018; Abou-Zeid, 2016).	-
		Perception among some students that plagiarism, cheating and collusion are acceptable, or not serious and/or not understanding what constitutes an academic integrity breach (Abdulrahman et al., 2017; Cheah, 2016; Imran & Nordin, 2013; Maimunah et al., 2018; Moten, 2014; Nahar, 2018).	-
		The needs for enhancement of academic skills to help avoid misconducts (Cinali, 2016; Orim, 2016; Shukr & Roff, 2015).	-
		Religious teaching has little impacts on student attitude toward academic integrity (Quah et al., 2012).	Explicitly unpacking and explaining ethical behaviours, and how they relate to ethical values and behaviours in Islam (Fantazy & Al Athamay, 2014).
		Negative student peer pressures (Cheah, 2016).	
		Existing negative collectivist attitudes leading to unethical behaviours among students (Shukr & Roff, 2015; Abou-Zeid, 2016).	
		Reluctance among students to report breaches (Abdulghani et al., 2018).	
Lecturers and Professors	Inappropriate referencing Data manipulation Data fabrication Faked research Self-plagiarism	Negative influences of social environment on student attitude toward academic integrity (Abdel-Hadi, 2017)	
		Some students understand that bribery is unacceptable but failed to understand plagiarism and ghost writing (Nahar, 2018)	Labelling negative academic behaviours are needed (Abdulghani et al., 2018; Adiningrum, 2015; Orim, 2016; Shukr & Roff, 2015)
		Breaches of academic integrity among academics including inappropriate referencing and paraphrasing, data manipulation, data fabrication and faked research (Adiningrum, 2015; Hoodbhoy, 2013 as cited in Moten, 2014).	
		Reluctance among some faculty to participate in addressing academic integrity breaches (Cheah, 2016).	
		Onerous process of handling academic integrity breaches (Cheah, 2016).	A systematic approach to handling academic integrity breaches (Maimunah et al., 2018; Moten, 2014).
		Lack of knowledge of the importance of maintaining academic integrity (Adiningrum, 2015)	-
		Lack of knowledge of academic integrity among some lecturers, especially understanding the boundaries of ethical and unethical behaviours (e.g. self-plagiarism). (Mohanty, 2016, Adiningrum, 2015)	

Table 2 Summary of challenges of culture in the Muslim World to promote academic integrity and proposed strategies (*Continued*)

Agents within the Cultures	Breaches of Academic Integrity	Challenges	Suggestions from the literature
Institutional culture	Plagiarism Cheating Ghost-writer Publication in predatory journals	Insufficient understanding of effective use of academic integrity assisting technologies such as text-matching tools (Adiningrum, 2015).	
		Lack of academic integrity policy (Moten, 2014, Orim, 2016).	
		Lack of policy with detail and emphasis of academic integrity (Shukr & Roff, 2015).	
		Lacking of accessibility of academic integrity policy by students and faculty (Adiningrum, 2015)	The visible and enacted policy to empower and protect subordinates to act when their seniors behave in ways that lack academic integrity (Orim, 2016; Imran & Nurdin, 2013; Shukr & Roff; 2015).
		Lack of academic integrity assisted technology such as text-matching tools due to limited fundings (Maimunah et al., 2018).	
		A lack of consistency in determining the level of breaches and appropriate sanctions and respond to a culture of leniency towards breaches (Adiningrum, 2015; Akbar & Picard, 2019)	Clear deterrents and punishments for academic integrity breaches (Cheah, 2016; Moten, 2014).
		Corruption, Nepotism and Cronyism (Cinali, 2016)	
		Institution-lecturer pressures and lecturer-student pressures related to publications (Adiningrum, 2015; Ghazi-noory et al., 2011)	Supports from higher education institutions in terms of publication and learning support for students and staff are required (Ebadi & Zamani, 2018; Cheah, 2016; Orim, 2016; Adiningrum, 2015).
		Lack of funding, facilities and equipment for research (Ebadi and Zamani, 2018)	
		Lack of effective cooperation among various parties within the universities (Cinali, 2016; Mansoor & Ameen, 2016, Abou-Zeid, 2016, adiningrum, 2015)	
Learning Culture and Technology	Plagiarism Fabrication Falsification Cheating	Inconsistency implementation of policy and practice of academic integrity in faculty level (Adiningrum, 2015)	
		Lack of Explicit responsibilities and clear procedures to combat academic misconduct (Orim 2016)	
		Lack of Details within the policies on intentional and unintentional plagiarism (Akbar & Picard, 2019)	Shared responsibility and uniformity in the understanding of the importance of academic integrity across different institutions (Adiningrum, 2015; Cinali, 2016; Cinali, 2016).
		Emphasis on Memorization, repetition and exam-oriented assessment (Abou-Zeid, 2016; Cinali, 2016; Maimunah et al., 2018; Orim, 2016)	Ensuring that learning experiences offer practical skills supporting academic integrity including critical thinking, paraphrasing while implementing process-oriented rather than goal-oriented education (Cinali, 2016; Pallavi & Kaushal, 2017; Quah, Stewart & Lee, 2012)
		Teacher-centred classrooms with emphasis of copying and imitating teachers (Orim, 2016)	
		Previous learning experiences negatively impact on likelihood for breaches of academic integrity in	

Table 2 Summary of challenges of culture in the Muslim World to promote academic integrity and proposed strategies (*Continued*)

Agents within the Cultures	Breaches of Academic Integrity	Challenges	Suggestions from the literature
		higher education level (Abou-Zeid, 2016; Mohanty, 2016; Orim, 2016).	
		A substantial number of plagiarised contents in Islamic web-based information and official websites (Moten, 2014).	
Societal Culture	Plagiarism Cheating	The practice of Collectivism detrimental to academic integrity (Abou-Zeid, 2016; Cinali, 2016, Adiningrum, 2015; Ghazinoory et al., 2011)	Collaborating with Parents and other parties external to the universities in the efforts of creating academic integrity environment (Cinali, 2016; Ghazinoory, Ghazinoori & Azadegan-Mehr, 2011
		A culture of power misuse (<i>Wasta</i> culture) (Cinali, 2016)	
		Lack of supports for academic integrity from social environment (Abou-Zeid, 2016)	
		Nanny culture (Cinali, 2016)	
		Parental pressures (Abou-Zeid, 2016; Cinali, 2016; Mohanty, 2016; Nahar, 2018).	

internal higher education level and broader societal level, the religion of Islam and Muslim culture plays a key role both in relation to challenges to and affordances for promoting a culture of academic integrity. In order to extrapolate the positive ethical and moral values promoted by the religion to the academic environment and promote a culture of academic integrity, it is important to explicitly address the challenges highlighted in Fig. 2. In addition, it is important to explicitly communicate to students and staff through policy and institutional practice how religious mores can be translated into academic ethics or behaviour. Otherwise it is easy in Muslim majority contexts to view academic integrity as an imposed western construct. This study is limited in that it summarises a relatively small body of literature and does not represent all universities in Muslim majority countries and the described culture may appear in similar or different forms in other countries due to local cultural influences. This is an area suggested for further research. However, our aim is to trigger discussion among policy makers and implementers to address challenges of preserving academic integrity from the perspective of culture. Mapping challenges related to culture can serve as a reference point for prevention and educational programs to curb academic dishonesty by considering cultural challenges internal and external to the institutions. In addition, it provides a way of identifying and building on Muslim and local cultural elements that support academic integrity in order to develop locally relevant programs. We suggest that there is a need for further research to identify if the current academic integrity policies in countries with a majority of Muslims address these cultural challenges and ways to build on local cultural and religious practices.

Acknowledgements

This paper is written during the first Author PhD Study sponsored by Indonesian Endowment Fund for Education (LPDP) Scholarship.

Authors' contributions

A wrote the introduction, wrote the methodology, collected and analysed, results and wrote the first draft of the article. MP supported the overall research design and methodology and added the needed references for the methodology, wrote the Geographic Locations of Academic Integrity Culture section. MP also refined the writing of the analysis, structure and style of the article especially word choices and sentence choice to clarify meanings. The author(s) read and approved the final manuscript.

Authors' information

Akbar is a lecturer of State Islamic Institute of Palopo, Indonesia. His research interest includes higher education, academic integrity and English Learning and Teaching in Higher Education. He is currently a second year student of PhD (Education) studying at the University of Newcastle.

Michelle Picard is Akbar's PhD supervisor at the University of Newcastle. She is now Dean of Teaching and Learning in the College of Arts, Business, Law and Social Sciences at Murdoch University in WA, Australia. Her research interests are academic literacies, especially academic integrity.

Funding

None.

Availability of data and materials

This is an integrative literature review with all data published and available.

Author details

¹Institut Agama Islam Negeri Palopo, Kota Palopo, Sulawesi Selatan, Indonesia. ²The University of Newcastle, Newcastle, Australia. ³Murdoch University, Perth, Australia.

Received: 21 July 2020 Accepted: 21 October 2020

Published online: 08 December 2020

References

- Abdel-Hadi SA (2017) The level of moral competence and its relationship with the variables of, gender, specialization and academic year among Al Falah university students in Dubai. *Int J Bus Soc* 18:463–478
- Abdulghani HM, Haque S, Almusalam YA, Alanezi SL, Alsulaiman YA, Irshad M, Khamis N (2018) Self-reported cheating among medical students: an alarming finding in a cross-sectional study from Saudi Arabia. *PLoS One* 13:1–14
- Abdulrahman M, Alsalehi S, Husain ZS, Nair SC, Carrick FR (2017) Professionalism among multicultural medical students in the United Arab Emirates. *Med Edu Onl* 22:1–6
- Abou-Zeid MN (2016) Academic integrity: a perspective from Egypt. In: Bretag T (ed) *Handbook of academic integrity*. Springer, Singapore
- Adiningrum TS (2015) Reviewing plagiarism: an input for Indonesian higher education. *Aca Eth* 13:107–120. <https://doi.org/10.1007/s10805-015-9226-6>
- Akbar A, Picard M (2019) Understanding plagiarism in Indonesia from the lens of plagiarism policy: lessons for universities. *Int J Edu Int* 15:1–17
- Bamford J, Seigrou K (2005) International students and plagiarism: an analysis of the reasons for plagiarism among international foundation students. *Inv Uni Teach & Learn* 2:17–22
- Boundless.com. (n.d.). Credential society. <http://oer2go.org/mods/en-boundless/www.boundless.com/sociology/definition/the-credential-society/index.html>. Accessed 23 Feb 2020
- Bourdieu P (1991) *Language and symbolic power*. Polity Press, England
- Bretag T (2016) *Handbook of academic integrity*. Springer, Singapore
- Bretag T, Mahmud S (2016) A conceptual framework for implementing exemplary academic integrity policy in Australian higher education. In: Bretag T (ed) *Handbook of academic integrity*. Springer, Singapore
- Bretag T, Mahmud S, Wallace M et al (2011) Core elements of exemplary academic integrity policy in Australian higher education. *Int J Educ Integr* 7:3–12. <https://doi.org/10.21913/IJEL.v7i2.759>
- Cheah KJS (2016) Perspectives on academic plagiarism in Malaysia. In: Bretag T (ed) *Handbook of academic integrity*. Springer, Singapore
- Cinali G (2016) Middle eastern perspectives of academic integrity: a view from the Gulf region. In: Bretag T (ed) *Handbook of academic integrity*. Springer, Singapore
- Dzomeku V, Van Wyk B, Lori J (2019) An integrative literature review of interventions addressing knowledge, attitudes, and skills of health team to achieve best maternal outcomes. *J Mid Rep Heal* 7:1971–1980
- Ebadi S, Zamani G (2018) Predatory publishing as a case of symbolic violence: a critical English for academic purposes approach. *Cogent Edu* 5:1–25
- Fantazy K, Al Athamay AAR (2014) Ethics and religion in higher education evidence from United Arab Emirates universities. *Int J and Man* 24:180–196
- Ghazinoory S, Ghazinoory S, Azadegan-Mehr M (2011) Iranian academia: evolution after revolution and plagiarism as a disorder. *Sci Eng Eth* 17:213–216
- Gow S (2014) A cultural bridge for academic integrity? Mainland Chinese master's graduates of UK institutions returning to China. *Int J Edu Int* 10:70–83
- Imran AM, Nordin MS (2013) Predicting the underlying factors of academic dishonesty among undergraduates in public universities: a path analysis approach. *J Aca Eth* 11:103–120
- Ismail S, Yussof SH (2016) Cheating behaviour among accounting students: some Malaysian evidence. *Acc Res J* 29:20–33
- Kutieleh S, Adiningrum TS (2011) How different are we? Understanding and managing plagiarism between east and west. *J Acad Lang Lear* 5:88–98

- Maimunah LM, Herizal MH, Mukminin A, Pratama R, Habibi A (2018) Cutting the prevalence of plagiarism in the digital era: student teachers' perceptions on plagiarism in Indonesian higher education. *Prob Educ 21st Cen* 76:663–676
- Mansoor F, Ameen K (2016) Promoting academic integrity in south Asian research culture: the case of Pakistani academic institutions. *Sou Asi Stu* 31:77–90
- Mogra I (2017) Strengthening ethics: a faith perspective on educational research. *J Acad Eth* 15(4):365–376
- Mohanty S (2016) Academic integrity practice: the view from India. In: Bretag T (ed) *Handbook of academic integrity*. Springer, Singapore
- Morris EJ, Carroll J (2016) Developing a sustainable holistic institutional approach: dealing with realities 'on the ground' when implementing an academic integrity policy. In: Bretag T (ed) *Handbook of academic integrity*. Springer, Singapore
- Moten AR (2014) Academic dishonesty and misconduct: curbing plagiarism in the Muslim world. *Intel Disc* 22:167–189
- Nahar HS (2018) Exploring future accountants' academic fraud (in) tolerance: Oman evidence. *J Accoun Emer Econ* 8:66–83
- Orim SM (2016) Perspectives of academic integrity from Nigeria. In: Bretag T (ed) *Handbook of academic integrity*. Springer, Singapore
- Pallavi KA, Kaushal A (2017) Business student perception towards ethics: an exploratory study. *Int J Bus Eth Dev Econ* 6:22–28
- Quah CH, Stewart N, Lee JWC (2012) Attitudes of business students' toward plagiarism. *J Acad Eth* 10:185–199
- Sahad MN, Asni F (2018) Free-riderism among academicians: an ethical of Islamic perspective. *J Leg Eth Regu Iss* 21:1–6
- Shukr I, Roff S (2015) Prevalence of lapses in academic integrity in two Pakistani medical colleges. *Med Teac* 37:470–475
- Siaputra IB, Santosa DA (2016) Academic integrity campaign in Indonesia. In: Bretag T (ed) *Handbook of academic integrity*. Springer, Singapore
- Vectorstock (2020) Green geometric blank world map vector image. <https://www.vectorstock.com/royalty-free-vector/green-geometric-blank-world-map-vector-21528489>. Accessed 20 Mar 2020
- Vygotsky L (1978) *Mind in society: the development of higher psychological processes*. Harvard University Press, Cambridge, Massachusetts
- Whittemore R, Knaf K (2005) The integrative review: updated methodology. *J Adv Nurs* 52:546–553
- World Population Review (November 05, 2019) Muslim Majority Countries Population. Retrieved from <http://worldpopulationreview.com/countries/muslim-majority-countries/>. Accessed 27 Feb 2020

Publisher's Note

Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Ready to submit your research? Choose BMC and benefit from:

- fast, convenient online submission
- thorough peer review by experienced researchers in your field
- rapid publication on acceptance
- support for research data, including large and complex data types
- gold Open Access which fosters wider collaboration and increased citations
- maximum visibility for your research: over 100M website views per year

At BMC, research is always in progress.

Learn more biomedcentral.com/submissions

