

The Quest for Quality in University Education in the Post-COVID-19 Era: Do Anti-plagiarism Tools Still Matter?

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ABSTRACT

Plagiarism is a major global challenge to quality assurance in higher education. Various efforts have been made to overcome the menace including the use of anti-plagiarism tools. At the same time, many questions have been raised about the efficacy of the current generation of tools in detecting, preventing plagiarism, and guaranteeing the quality of education. This paper examines the limitations of plagiarism detection tools in enhancing the quality of academic outcomes and proposes measures for improvement. The paper argues that while anti-plagiarism software has a role in preventing plagiarism in academic writing and academic integrity, they are not the panacea to the plagiarism pandemic, especially in the COVID-19 era. It proposes that there is a need to reform methods of assessment and implement forward-looking policies to address the underlying causes of plagiarism, provide students with appropriate information literacy skills training, and above all cultivate a culture of academic integrity in higher education institutions (HEIs).

(Keywords: *Anti-plagiarism software; Plagiarism; University Education; Quality; COVID-19)*

I. INTRODUCTION

Plagiarism is a major global concern and a challenge to the goal of protecting academic integrity in higher education institutions (Levine and Pazdernik, 2018; Ndebele, 2020). According to Halgamuge, (2017), although plagiarism is not a new phenomenon and has existed for as long as the art of writing itself, it is today an increasing problem amongst students, academicians, and practitioners in various fields. Accordingly, plagiarism has attracted all-around condemnation due to its negative impact on teaching, learning, and research. Particularly for students, plagiarism denies them the opportunity to develop both psychomotor and higher-level cognitive skills (Olutola, 2016).

Various efforts have been made to overcome the menace including the use of anti-plagiarism software. However, many questions have been raised about the efficacy of the current generation of software to detect, and prevent plagiarism promote desirable graduate traits protect the integrity of student assessment, and consequently the quality of university education. The paper argues that while anti-plagiarism software contributes to identifying and preventing plagiarism in academic writing, they are not the panacea to the plagiarism pandemic. It emphasizes that the solution to the plagiarism pandemic lies in reforming the methods of assessment and implementing policies to address the underlying causes of plagiarism,

providing students with veritable research skills and particularly information literacy training, and above all cultivating a culture of academic integrity in the institutions.

Definition and categories of plagiarism

The term “plagiarism” has been associated with the Latin word *plagium*, which means “kidnapping” (Shin, (2019). This attribution is plausible because as summarized by Naik *et al.*, (2015) as well as the *Merriam-Webster Dictionary* (2017), the term plagiarism as used today refers to the act of appropriating other people’s work and presenting it as one’s own in literary works such as journal articles, term papers, and other essays, textbooks, speeches, as well as photographs, songs, and even ideas and concepts. Arising from this definition, plagiarism should be viewed as a despicable act, a vice, a threat to intellectual property, an obstacle to the quality of student learning, and a problem whose consequences are in real-life situations when graduates enter the job market.

Over the years, various typologies of plagiarism have been proposed (Eisa *et al.*, 2015; Mostofa *et al.*, 2021). According to Levine and Pazdernik (2018), plagiarism can generally be divided into two categories; intentional and unintentional plagiarism. Intentional plagiarism refers to situations where a person includes in their writing ideas and sections lifted from other sources, fails to acknowledge it through proper citation but rather

submits it as their original work. Unintentional plagiarism occurs when due to a lack of adequate academic writing skills, individuals present material that is borrowed from other sources without proper citation. At the same time, beyond this broad taxonomy, whether intended or not, plagiarism has been grouped into several categories: translation; copy and paste; disguised plagiarism; mosaic plagiarism; structural plagiarism; idea plagiarism: self-plagiarism, and purchase of scholarly papers.

Plagiarism by translation involves lifting text from a source in one language and translating it to another, either manually or using an automatic translation system, without indicating the source (Naik *et al.*, 2015). “Copy and paste” on the other hand involves copying relevant sections of work and using them in one’s academic writing with little or no change at all without appropriate referencing (Ma *et al.*, 2007). Disguised plagiarism refers to the copying and disguising of the copied material by removing, adding words, changing word order, or paraphrasing the material without acknowledging the source (Lancaster, 2019). Mosaic plagiarism occurs when culprits copy material from other sources, retain the original structure of sentences and paragraphs but replace words and phrases randomly, and fail to acknowledge the source (Das & Panjabi, 2011; Roig, 2015).

Structural plagiarism involves copying others word for word, including ideas, their arguments, quotations from other sources, as well as bibliography or footnotes without providing citations (Naik *et al.*, 2015). Idea plagiarism occurs when one appropriates someone else's idea without permission or appropriate acknowledgement of the source (Perfect & Stark, 2012). Self-plagiarism involves reproducing one's ideas, data, or text without reference to the source (Sathyanarayana Rao & Andrade, 2014). In other words, self-plagiarism involves copying sections of one’s previous paper or even a whole paper and using these sections in different manuscripts or presenting it as a new work, mostly with a new or altered title (Ahmed, 2015; Ali & Alhassan, 2021)

The purchase of essays is perhaps the most common form of plagiarism today. It involves commissioning or outright purchasing of term papers, master’s theses, doctoral dissertations as well other as scholars’ papers from the so-called ghost-writers, paper-mills, and online writing services (Pupovac *et al.*, 2008). There are myriads of outfits that provide online writing services for a fee including term papers, short assignments, masters’ theses, and doctoral dissertations (Chase, 2004 as quoted by Pupovac *et al.*, (2008).

II. CURRENT TRENDS IN PLAGIARISM

A literature review indicates that, in recent years, the practice of plagiarism has taken an upward trajectory (Reyneke *et al.*, 2021; Ison, 2018). The vice is evident in all parts of the world with cases being reported in countries on every continent for example the USA (Higgins *et al.*, 2016), Russia (Rostovtsev, 2017), across Africa (Kigotho, 2017; Fuzile, 2013, Fengu, 2017; Opara & Ezeonye, 2021), Australia (Jacks, 2016), Turkey and Pakistan (Yazici *et al.*, 2011), and China (Yang *et al.*, 2013).

There is also evidence that plagiarism occurs in all types of academic writing by both students, and researchers including exams, scientific research, assignments, quizzes, research projects, journal articles, and book publications (Mokdad & Aljunaidi, 2020). As a result, several authors argue that plagiarism has now reached “epidemic proportions” and threatens to compromise quality in educational and research processes throughout the world (Chireshe, 2014; Singh & Remenyi, 2016; Singh & Ganapathy, 2018).

Plagiarism occurs in face-to-face classes and virtual learning environments but there is an observation that it is more prevalent in online classes because students, aware that they are alone in “hidden” fees that are not being observed by the teacher may resort to plagiarism (Greenberger *et al.*, 2016). Recent literature suggests that during the COVID-19 pandemic period, plagiarism and other forms of academic dishonesty have increased drastically due to the shift of education, research, and other operations to virtual environments as a result of the prolonged COVID-19 lockdown (Gregory, 2020). ODEL courses and increased work-at-home arrangements for researchers, undergraduate and postgraduate students, are also associated with increased stress and pressure among students, lack of clear norms on how to conduct themselves in online environments, and higher use of online materials hence a higher propensity to engage in plagiarism (Lederman, 2020; Mokdad & Aljunaidi, 2020).

Overview of causes and impact of plagiarism

Several factors have been proposed to explain the recent increase in cases of plagiarism. Javaid *et al.*, (2020) as well as Pecorari and Petric, (2014) have argued that poor research skills are the major reasons why students plagiarize. This argument is echoed by Burger (2018) as well as Eldin, and Ela, (2016) and Ibegbulam and Eze, (2015) who observe that many forms of plagiarism result from a lack of information literacy skills such as information searching and retrieval, writing skills coupled with difficult assignments, sometimes beyond the abilities of students. Akbulut, *et al.* (2008) on their

part have blamed the vice on the desire to have better grades than others, in the face of stiff competition for limited opportunities.

Several authors have observed that students often experience an excess workload and are many times under immense pressure to produce pieces of academic writing which may drive them to commit plagiarism (Pupovac *et al.*, 2008; Ocholla & Ocholla, 2016; Catacutan, 2021). Postgraduate students have deadlines to publish to graduate while academics earnestly strive for promotion or tenure both of which contribute to ghost-writing (Elkhatat *et al.*, 2021). Therefore, the tenet 'publish or perish' which puts immense pressure on faculty members to publish more and faster has been decried as a possible cause of plagiarism by academics (Catacutan, 2021, Chandere, *et al.*, 2021).

Ndebele (2020) has argued that the spread and availability of information technologies and easy access to electronic information resources in the form of e-journals, e-books, etc. encourage copying, cutting, pasting, and editing to suit their research purposes. This view is shared by Shankar and Ramasesh (2014), Levine and Pazdernik, (2018), and Sentleng and King (2012). More fundamentally, the spread of plagiarism has been blamed on the absence or existence of weak, unclear, or poorly implemented institutional policies and procedures on plagiarism (Wheeler & Anderson, 2010). According to Ramzan *et al.* (2012), and Gullifer and Tyson, (2014) an environment where culprits of plagiarism are not caught or go unpunished due to a lack of policy or lack of enforcement is likely to propagate all types of plagiarism.

The foundational case for the eradication of plagiarism is that it is a hindrance to quality in educational processes such as teaching, learning, and research. Written assignments are aimed at providing opportunities for students to learn cognitive knowledge in specific subjects as well as develop skills of analysis, evaluating ideas from diverse sources, and applying them in various contexts. By encouraging students to pass through an education system without reflecting or assimilating knowledge, plagiarism hinders students' learning, intellectual growth, and development of skills for creative thinking, generating and contributing to knowledge in their respective academic disciplines (Catacutan, 2021; Dipongkor, *et al.*, 2021, Ndebele, 2020; Atkins & Nelsen, 2001; Wheeler & Anderson, 2010).

Plagiarism occurs mainly in the context of the assessment of learning which is geared towards gauging academic

performance and revealing the level of knowledge obtained by the students (Youmans, 2011). Plagiarism is a form of academic dishonesty that gives an unfair advantage to its perpetrators over other students (Svirina & Excelia, 2022; Dipongkor, *et al.*, 2021). In an environment where plagiarism is rampant, assessment of the academic achievement of learners objectively is difficult and may produce misleading academic outcomes (Dipongkor, *et al.*, 2021; Nguyen *et al.*, 2020; Bilen & Matros, 2020; Suseela, 2016)

Plagiarism is globally considered a dishonest, unfair practice and a violation of the law and intellectual property rights of authors and publishers (Krimsky, 2021; Chandere *et al.*, 2021 Tsatsaronis *et al.*, 2010). Students who engage in unethical practices such as plagiarism during their university education process are likely to do the same upon graduation (Thomas & De Bruin, 2012; Winrow, 2016). Indeed, considerable literature suggests that plagiarism has long-term damage to the moral sensitivity of students and therefore may be a predictor of future corrupt behaviour among professionals when they join the workplace and in the wider community. Catacutan, (2021) has underlined the corrupting nature of plagiarism where students are habituated to corruptly receive an unfair advantage over others and cultivate a negative attitude toward honest work which they carry within their adult life. Therefore, this is a manifestation of a lack of integrity and can damage not just the reputation of the educational system, academic institutions, and its academicians but also disadvantage its graduates (Ndebele, 2020; Ramdani, 2018).

III. THE EFFICACY OF PLAGIARISM DETECTION SOFTWARE

Educators, university administrators, academic leaders, publishers, librarians, and researchers are desperately looking for solutions to the problem of plagiarism (Chireshe, 2014; Singh & Remenyi, 2016; Singh & Ganapathy, 2018). Many universities have used various methods to minimize the occurrence of plagiarism among by subjecting scholarly works produced by both staff and students to plagiarism detection software (Halgamuge, 2017). There are many kinds of free or commercial antiplagiarism software in use by different institutions to detect plagiarism. Key among these is Turnitin, Plagscan, Copyleaks, Whitesmoke, Paperrater, Grammarly, Essay Toolbox, ArticleChecker, PlagiarismCheck, Dustball, Copyscape, search engine reports, Plagiarisma, Viper, Plagtracker, among others (Lukashenko *et al.*, 2007; Ali *et al.*, 2011; Ahmed, 2015; Saini *et al.*, 2016; Aarthi *et al.*, 2018; Chandere, *et al.*, 2021; Khaled & Al-Tamimi, 2021).

Generally, antiplagiarism software prevents plagiarism through the following processes:

- i. Identify the fragments of text borrowed from other sources (Tsatsaronis *et al.*, 2010; Dodigovic & Jiaotong, 2013; Gosavi & Deshmukh, 2021).
- ii. Show written falsification rate through a similarity index (Gosavi & Deshmukh, 2021).
- iii. Provides an “originality report which suggests the percentage of the author’s work that matches other academic sources in an online database (Davis & Carroll, 2009).
- iv. Indicate the percentage of matching text for each named source and present these in a ranked list in order of quantity. With each author’s text, the reviewer can click on a matched section and see the suggested ‘original’ text side-by-side for an instant comparison between the two texts”.

The main limitation of anti-plagiarism software is that they do not detect plagiarism directly. Rather, they identify phrases that match others in works created earlier hence the term “similarity checks” which in many cases is mistakenly interpreted as a measure of plagiarism (Royce, 2003; Mphahlele & McKenna, 2019). Secondly, several anti-plagiarism software is not capable of searching all available online material and thus give incomplete reports, and over-report similarity by flagging commonly used phrases, and legitimate sections of the work as plagiarised which can lead to incorrect plagiarism index ((Weber-Wulff, 2015; Royce, 2003).

Thirdly, the ability of these to detect similarity is very low in case the plagiarism involves translation from different languages and is virtually impossible if it involves material that has not yet been digitized (Mphahlele & McKenna, 2019). Similarly, ghost-writing, dot replacement, fake references, and data manipulation cannot be easily detected by software in the same way as text plagiarism and so far, indeed there is no effective solution for it (Lancaster, 2019; Patel *et al.*, 2011).

Fourthly, there are many cases and possibilities of manipulating work and plagiarism results by the perpetrators. For example, writers may change sentences or keywords within the passage so that they cannot be matched with the sources (Elkhatat *et al.*, 2021). In other cases, individuals can revise a non-authentic work until it passes the plagiarism check, without consideration of possible quality deterioration. Particularly, there is an increased use of Artificial Intelligence (AI) plagiarism removers to “whitewash” documents such that similarity cannot be detected even by the best plagiarism detection software (Patel *et al.*, 2011).

There are reported cases of anti-plagiarism software being used within institutions, as a tool for policing rather than for furthering academic goals (Mphahlele and McKenna, 2019). According to many experts, focusing on detecting plagiarism and punishing the culprits is counter-productive since the root causes of plagiarism remain unresolved and do not contribute to better academic writing practices (Živković *et al.*, 2015)).

IV. WAYS OF IMPROVING THE USEFULNESS OF PLAGIARISM DETECTION SOFTWARE

Anti-plagiarism software has a significant role in the eradication of plagiarism. The key to making plagiarism detection software more effective in this role is to adopt them as a learning tool rather than a diagnostic tool for the ‘catch and punish’ policy. Rather anti-plagiarism tools should be used to identify, prevent, and eliminate plagiarism in assignments and improve academic writing (Dodigovic, 2013; Patel *et al.*, 2011). Positive results have been reported in situations where these similarity reports from antiplagiarism software have been used to engage students in evaluating and improving their writing assignments. This practice gradually improves skills of analysis, synthesis, and presenting ideas from other sources among students (Mostofa *et al.*, 2021; Eisa *et al.*, 2015).

Another approach to augmenting the use of antiplagiarism software is a review of pedagogical approaches in favour of a constructivist, evidence-based by creating an environment where students are responsible for their learning (Reyneke *et al.*, (2021). This includes providing fewer class notes and handouts, providing more general guidance on the purpose and expected learning outcomes of a particular course, comprehensive course content, core-reading reading as well as revision quizzes to assess learning. This enables students to directly engage with global experts of the subject one is studying, engage in analyzing different issues, topics, and ideas, gain the expected knowledge and skills and discover by themselves, deeper meaning and their application in life situations

Another suggestion for combating plagiarism among students is the review of assessment methods by focusing on assignments that test critical thinking, analysis, and application of knowledge rather than the acquisition of cognitive knowledge. Additionally, there is a need to avoid repetitions of assignments in any given course, in favour of multiple-choice questions that require research, and those that require progressive build-up through other tasks toward final submission (Patel *et al.*, 2011)

Comprehensive, carefully-crafted, forward-looking and fully implemented policies have been identified as key to addressing and eradicating academic scientific dishonesty such as plagiarism (Olutola, 2016; Anney & Mosha 2015; Pecorari & Petric, 2014; Maxel, 2013). Useful policies, in this case, include those on research integrity, intellectual property rights, and anti-plagiarism. Importantly, these policies should not just focus on a deterrent measure of “catch and punish” but also promote the proactive participation of members of the community in promoting values, skills, and best practices in scholarship. According to several authors for policies to be effective they should have a training component on techniques of quality research and academic writing, intellectual property rights, and ethical values and laid down procedures for detecting, removing, and remedying plagiarism.

A major solution to plagiarism is the impartation of information literacy skills to various players in the scholarly communication ecosystem, including students (Morris, 2016). Information literacy includes skills and competencies of how to identify the information required in a particular context, how to discover, access, information, analyze, synthesize, and apply it and share with others with due consideration to the ethical expectations that preclude plagiarism. This includes the skill of academic writing techniques, and respect for the ethical values and legal requirements in the use of use and sharing of information in scholarly activities (CILIP, 2018). Already institutions across the globe have information literacy courses that include topics such as citation techniques, and academic integrity (Yang *et al.*, 2019; Khan *et al.*, 2021).

According to many writers, the ultimate solution to the plagiarism pandemic lies in developing and sustaining a culture that values academic integrity and upholds best practices in scholarship in the academic community (Stappenbelt & Rowles, 2009). This includes training students on ethical practices in scholarship, the dangers of plagiarism, and respect for intellectual property (Olutola, 2016; Wheeler & Anderson, 2010).

V. CONCLUSION AND RECOMMENDATIONS

Plagiarism in higher education largely occurs due to many factors including, a willful attempt to earn undeserved academic credit, and a lack of competencies in research and information literacy to support the proper use of information resources or other people's ideas in learning and research. The vice is an increasing risk to quality in teaching and compromises assessment of

learning. Therefore, concerted action by all stakeholders is required to minimize its erosive effect on the quality of university education. Plagiarism detection software is useful in detecting and removing plagiarism in student assignments work and therefore components of quality assurance mechanism in university education. However, these tools are not a panacea to the menace, since they do not address the root causes of the problem and are ineffective in addressing some forms of plagiarism. However, in overcoming the plagiarism menace there is a need to complement the use of anti-plagiarism software such as the implementation of forward-looking policies, review of methods of assessment, and improving the research and information literacy skills of various players. Therefore, the ultimate solution to the plagiarism menace lies in the cultivation of a culture of academic integrity within academic and research institutions.

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