THEMATIC ANALYSIS OF ANTI-PLAGIARISM SOFTWARE UTILISATION FOR AUTHENTICATION OF STUDENTS' ASSIGNMENT AND PROJECT WRITING IN OPEN, DISTANCE AND ELEARNING

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Abstract

The ODeL is a blended application of the conventional pedagogy and information and communication technologies (ICTs) to deliver quality education remotely to students. It places at its core, an online classroom for delivering instructions through facilitation of access to seasoned tutors and multimedia information resources for engaged learning and academic work by students. This paper explores existing studies on the types and the use of anti-plagiarism software for checking ODeL students' assignment and project writing through deductive thematic analysis. n=422 scholarly articles were sieved from the Google scholar search engine, manageable and analysed using six basic steps of familiarization with the studies, coding, and themes construction from the studies, reviewing themes, defining the themes and writing thematic analysis to identify themes on anti-plagiarism software used in ODeL and challenges. It was revealed that the types of anti-plagiarism software used for authenticating ODeL students' assignments and projects are categorized into open source that are freely available and the commercial ones which require subscription and authorization to use. The plagiarism detection software mostly used in ODeL universities around the globe is Turnitin followed by iThenticate. The least used is My Drop Box, other fairly used ones are Plagiarisma, Plag Scan, Copy Leak and WordCHECK. Some of the notable challenges that aid plagiarism are, not understanding when to cite authors in works and wide access to the Internet. The least challenge has to do with inability to format citation and references. Other notable challenges are not having appropriate information literacy skills training, lack of ability to do "information synthesis and lack of motivation. It was concluded and recommended that, ODeL institutions must harness resources to address the growing cases of unethical use of intellectual literary works of authors by the students in their assignments and projects. They should do so approaching the challenge by providing enabling policies, technology and cooperation. The policy must include training and embedded programmes for ODeL students, educators and other relevant stakeholders to ensure uniformity and promotion of coordinated approach to ethical teaching and learning.

Key Words: Anti-plagiarism, Assignment, Project writing, Authentication, Thematic Analysis Open, Distance and Learning

Introduction

Plagiarism is the utilisation of people's literary presentation without acknowledging or properly citing them or a deliberate act to dishonestly paraphrase and claim existing authored intellectual literary creativity. This act is fast becoming a dire moral issue that is devouring the

fabric of intellectual integrity and ingenuity among students, particularly in colleges and universities that even recent Studies revealed 40% to 90% of students admitted to have engaged in dishonest intellectual activity at higher education level that amount to plagiarism, Bennett (2023). Additionally, reported that at least 68% of students have plagiarized; 85% of them thought it will help them to earn a better score; 7% self-report admitted to have turned in work done by another. On a similar note 7% of undergraduates and 3% of graduates accepted to have had someone else write their entire paper to help them earn excellent scores.

In Open Distance and eLearning (ODeL) the situation is increasingly worrisome and begs for drastic solution to curb the unethical manipulation of owned literary work of individuals by the ODeL students primarily, when encountering terminal project. The blended nature of the ODeL being practiced at the moment in Nigeria is a policy of the NUC which directs online dissemination of knowledge with a greater part of the activity being executed with the aid of information and communication technologies. This process is no doubt, prone to unethical use of information and knowledge, and thus, students' academic tasks such as assignment and projects works are not free from plagiarism. This scenario can be painted as a classic illustration of technology aided plagiarism amongst the ODeL students who engage in dishonest plagiarisation of published works (Bibi & Hafeez, 2018).

Plagiarism is equally a major concern in the academia that is currently garnering barrage of intellectual discourse leveled at addressing its menace. Notable views amongst scholars that are leading this discourse maintained that intellectual property, particularly; literary works must be protected against all forms of unethical use. These scholars have aligned their positions with the sacrosanct universal declarations of 1948 which instituted intellectual property rights as a part of the fundamental human rights in its article 27(2). This further proves that violation of these rights will be tantamount to litigations that will not only be costly but damaging to the affected students and institution. It therefore imperative to examine the utilisation of anti-plagiarism software for management of students' academic task, and to know their types and features and to also understand how the software are being used in shaping the production of genuine academic contents and for the promotion of ethical academic practices in the cycle of literature consumption and production among ODeL students. This objective will be achieved through an in depth thematic analysis of existing studies.

Problem Statement

The Open Distance and eLearning (ODeL) is an upgraded version of the distance learning that has existed for millennia which imbibed principally, the postal system among other systems used to get study manuals and instructions delivered to students. It is a means used for sporadic education of the public through simplified and less costly method of getting individuals educated and continuously developing a dependable workforce. The ODeL that is being practiced for instance by the Ahmadu Bello University is an hybrid one that combines a bit of traditional and the contemporary means of communication and interaction. The system has the capacity to accommodate large number of enrollees due to its robust ICT in-built Learning Management System (LMS); lectures are delivered in an online monitored classroom

environment; and the students can have access to digital and print learning resources for their assignment, project works, learning and independent study.

However, overtime, the endless complains etutors who participate in the tutoring of ODeL students make on detection of several ethical violations in students assignments and particularly, in their project works is alarming as it amount to plagiarism and worrisome when their output is placed on a scale of effective learning and academic integrity. In fact, despite the availability of anti-plagiarism software, some academics (opponents) maintain that project writing for ODeL students should be substituted with something else. Proponents believe that the task can be monitored through effective deployment of, and subjection of students projects to thorough anti-plagiarism checkers. But the question is, are ODeL Students projects and assignments not being subject to plagiarism checks? What types of anti-plagiarism are being used for checking ODeL students works? And what challenges are encountered in doing so? To find answers to these speculations, the researcher conducted a deductive thematic analysis on existing studies on utilisation of anti-plagiarism software in ODeL institutions around the globe.

Research Objectives
1. To find out the types of anti-plagiarism software being used for students project writing and assignments in Open Distance and eLearning institutions
2. To identify the challenges associated with using anti-plagiarism software for students project writing and assignments in Open Distance and eLearning in institutions

Literature Review
Distance education has been around for centuries introduced to serve different educational need and policies in Europe and in the West. Literarily, the first distance education course in the modern sense was provided by Sir Isaac Pitman in the 1840s who taught a system of shorthand by mailing texts transcribed into shorthand on postcards and receiving transcriptions from his students in return for correction (Alan, 2003). The need for distance learning has been recently echoed and entrenched in mono-mode universities around the globe particularly, in Africa occasioned by the unprecedented spread of the contagious Covid 19 pandemic.

In addition, Open Distance and eLearning is a method of study specifically designed for students who are separated from teachers by distance, an electronic learning (Learning Management System Platforms) performed via communication technologies like computer and the Internet (Wordu, 2022). The platforms are basically caterogorised as open and restricted sources which imply that, there are freely or philanthropic sourced learning management software and the ones created for commercial purpose.

The concept of anti-plagiarism software was borne out of the need to stem the tide of ethical violations of individuals' intellectual literary creation and promote Nobel scholarship of not only of academic importance but of societal reverence. According to Pcmag (2024) plagiarism checker is "software that searches the Web for duplicate textual content. It may be a stand-alone program installed in the user's computer or a function of a website, such as Turnitin.

Universities increasingly use anti-plagiarism software to determine if students have copied someone else's prose, and writers use it to see if others are using their copyrighted work in full or in part". The software runs through indexed links, sites and databases to match text and sentences with the copy that is being scanned to identify similarities and in turn provide a report of similarity index showing the degree of copied contents. This process is geared towards the minimization of academic misconduct among the ODeL students.

Furthermore, the ODeL which is driven by advancement in technology paves room for students to engage in acts that violate academic integrity. This act must be continuously checked to maintain certain acceptable level of decency and academic standards, although there other acts that mars standards however, cheating and plagiarism are seen as the common behaviours and studies have affirmed that international students are particularly prone to acts of academic misconduct such as plagiarism (Boafo-Arthur and Brown, 2017).

Randomized trajectories of utilisation of anti-plagiarism software from a couple of studies revealed findings of great concern to the academia, government and individuals. Ali and Suleiman (2014) examined the perspective of anti-plagiarism from northern universities in Nigeria. They investigated student's awareness and indulgence in plagiarism and their perception of punishment towards Plagiarists using mixed instruments (questionnaire and interview) for data collection. Their result of the interviews showed that 90% of students have plagiarized at one time in the past, 68% have included textbooks and other sources in the bibliography of assignments, out of which 50% had written books that they didn't even consult.

The quantitative study conducted by Muhammad and Rilwan (2020) on awareness and utilisation anti-plagiarism among academics in Yusuf Maitama University showed that majority of them are not aware of anti-plagiarism software but concord that it should be deployed to deter students from plagiarizing and thereby assist in improving their writing ability.
Investigating predictors of academic plagiarism among students Pisa (2020) employed quantitative and descriptive survey to study 200 students, his findings revealed high-levels of the understanding of plagiarism, and an awareness of the university and departmental plagiarism policies. However, an analysis of the plagiarism practices revealed moderate levels of plagiarism, indicating a likelihood of intentional plagiarism among students. Two significant predictors of plagiarism practices among university students were identified as; the understanding of plagiarism and the understanding of the university-wide plagiarism policy. University instructors and education managers are informed through the findings of this study that clear plagiarism policies are important in reducing academic dishonesty among students. It is important to continuously train students on what plagiarism entails and how to avoid academic dishonesty.

Methodology
Deductive Thematic Analysis (DTA) was used to analyse studies on utilisation of anti-plagiarism software in Open Distance and eLearning (ODeL) for academic works such as assignment and project. DTA is a powerful tool that can be used in quantitative research of this nature. It can be used to identify relationships between studies and other variables, identify

patterns in the studies, and provide insight into the data that may not be otherwise apparent. It is an important tool for researchers to consider when conducting quantitative research. It is comprised of six basic steps of familiarization with the studies, coding, and themes construction from the studies, reviewing themes, defining the themes and writing thematic analysis (Success Team, 2023). A total of n=422 indexed articles on the Google scholar as at 7th ,8th ,9th and 10th April, 2024 were sieved and in summary, analysed to identify themes on anti-plagiarism software used in ODeL and the challenges that go with their use.

Thematic Analysis

Table 1: Types of Anti-Plagiarism Software used in Open Distance and eLearning Institutions

Theme				
Research Objective 1	**Anti-Plagiarism**	**(F)%**	**Anti-Plagiarism**	**(F)%**
To find out the types of anti-plagiarism software being used for students for project writing and assignments in Open Distance and eLearning institutions	1. Turnitin,	160(37.9%)	13. Quetext – open sources	12(2.8%) 5(1.2%)
	2.URKUND	7(1.7%)		
	3.iThenticate	68(16.1%)	14.Check For Plagiarism – commercial	24(5.7%)
	4.Glatt Plagiarism Services	5(1.2%)	15. Plagiarisma – open source	20(4.7%) 12(2.8%)
	5.WCopyFind	7(1.7%)	16. PlagScan – commercial	17(4.0%) 11(2.6%)
	6.IntegriGuard	8(1.9%)		
	7.WordCheck	2(0.5%)	17.Viper – open source	3(0.7%)
	8.EVE2	5(1.2%)	18. CopyLeak – open source	10(2.4%) 8(1.9%)
	9.My Drop Box	1(0.2%)		
	10.EVE	5(1.2%)	19.Dupli checker – open source	9(2.1%)
	11.WcopyFind	7(1.7%)	20. Plag Tracker – commercial	
	12. WordCHECK	16(3.8%)	21. Plagium – open source	
			22. Crot-open source	
			23. Antiplagiat	
	Selected Sources: (Adamu, R. & Muhammad, S. D., 2020; Kunschak, C. 2018; karimi, E et al…, 2019; Paul, S., 2012; Vandana C.et al…. 2021; Lee, Y. , 2011; Ledwith,, A, & Angél, R., 2008; Kagan, B.L. et al…, 2019; Ainoutdinova, I., et al…, 2022)			

Google Scholar hit in 0.5sec 11,100(April, 11-15, 2024)

Table 1 reveals themes on the types of anti-plagiarism software used for authenticating ODeL students' assignments and projects. The software is categorized into open source that are freely available and the commercials, which require subscription and authorization to use. The plagiarism detection software mostly used in ODeL in universities around the globe is Turnitin160 (37.9%) followed by iThenticate 68(16.1%). The least used is My Drop Box with1(0.2%). Other fairly used ones are Plagiarisma 24(5.7%), Plag Scan 20(4.7%), Copy Leak 17(4.0%) and WordCHECK 16(3.8%).

Table 2: Challenges to using Anti-Plagiarism Software by ODeL Students

Research Objective 2	Themes	(F)%
To identify the challenges associated with using anti-plagiarism software for students project writing and assignments in Open Distance and eLearning in institutions	1. "Understanding when to cite"	66(15.6%)
	2. "Information synthesis "	35(8.3%)
	3."Formatting citations and references"	8(1.9%)
	4. "wide access to the Internet",	54(12.8%)
	5. "the use of readymade solutions to meet didactical tasks"	18(4.3%)
	6. "students' appetite for plagiarism"	28(6.7%)
	7. "lack of motivation as the main cause of plagiarism"	32(7.6%)
	8."appropriate information literacy skills training"	48(11.4%)
	9. **"**mainly due to the availability of information and communication technology"	23(5.5%)
	10. "lack of self-competency"	
	11. "positive attitudes toward plagiarism"	19(4.5%)
	12. "lack of control over plagiaristic behaviors"	20(4.7%)
	13. "students' overload, which leads to demotivation and physical fatigue"	13(3.1%)
		18(4.3%)

Selected Sources: (MacLennan, H., 2018; Sorea, D., et al…, 2021;

Fons, I.T & Tape, T.G, 202; Kavulya, J. M., et al…, 2023; El-Dakhs, D. A., 2020; Krylova-Grek, Y. & Shyshkina, M. P., 2021)

Google scholar hit in 0.14sec (April 12-18, 2024)

Table 2 shows themes on identified challenges associated with using anti-plagiarism software for ODeL students' assignment and project. From the studies analysed, it appeared that ODeL students have challenge with "understanding when to cite" authors in their work and that topped the thematic analysis by 66(15.6%) followed by the "wide access to the Internet" with 54(12.8%) as being the reason why the students plagiarise people's work. The least challenge has to do with having challenge with "formatting citation and references" 8(1.9%). Other notable challenges are not having "appropriate information literacy skills training" 48(11.4%), lacking ability to do "information synthesis" 35(8.3%) and "lack of motivation as the main cause of plagiarism"32(7.6%).

Discussion of Findings

Universities running ODeL programmes around the globe particularly in Europe do subject students' works to plagiarism checks. However, some scholars believe that plagiarism checks aids quality academic standards but it is not the panacea to quality academic writing, hence there is need for investing in information literacy skills acquisition and writing skills for students (Kavulya, et al… 2023) This study has in part, found out the types of anti-plagiarism software being used in ODeL and some of their ratings. For instance, a test ran by scribbr plagiarism company in 2023 (www.scribbr.com/plagiarism/best-plagiarism-checker/) showed that scribbr software was rated first above Plagaware; Quetext; Viper; Plagiarism detector; Copyleaks; Smodin; Compilation; and Writer due to its reported ability "to detect plagiarism in both exact copies and heavily edited plagiarized texts, and to provide a clear report". While this test was conducted by the scribbr company it is not free from bias. On the contrary, in a report upheld by TrustRadius (2024) Turnitin and iThenticate were rated above scribbr which has got no rating. This implies that, universities must be prudent in the selection and subscription to anti-plagiarism software for academic work. The thematic analysis here has overwhelmingly shown that Turnitin is a popular type of commercial anti-plagiarism software being used in universities and in other academic institutions around the globe and next after it is iThenticate. In the other category of open source anti-plagiarism software, Plagiarisma and Copyleak are popular software. Above all, ODeL institutions must be guided by quality assurance report, standard, lived experience when planning to selecte a type of anti-plagiarism software. The thematic analysis revealed also, that, there are fewer studies on anti-plagiarism application in ODeL institutions in Nigeria. This may in part account for the concerns being shown by tutors of ODeL as stated in the problem statement.

The utilisation of anti-plagiarism software is being confronted by the existence of enabling information environment such as the Internet which is a veritable technology for facilitating ODeL. However, wide access to it gives ODeL students opportunity to plagiarise copyrighted intellectual literary works due to the digital nature of the works some of these students see them as read-made and therefore, can be presented for their academic success(Mulenga and Shilongo, 2024). There is no doubt; there are other factors that have

contribute to the malignant plagiarism disease that is rippling through students, educators and institutions such as the work load, time constraint and academic pressure which particularly, put the ODeL students at disadvantage. This situation must be addressed by the seemingly flexible nature of ODeL system by instituting policies and creating rooms for the students to run at their own pace, to take the courses with considerable flexibility and accomplishment. Another but critical challenge that should be tackled through appropriate information literacy and writing skills programme is the understanding and knowing when to cite other people's work. Students must be taught citation styles and how they are done to acknowledge and appreciate the contributions made by others. Particularly, students who have long forgotten the culture of academic writing must be taking through refresher courses. Students' appetite for plagiarism must be discouraged through better training, getting teachers more involved in their activities, encouraging the use of anti-plagiarism software by making its use mandatory for assignments and projects, by providing clear anti-plagiarism policies and schooling the youth on ethical education (Sorea, et. al…, 2021).

Conclusion and Recommendations

The ODeL institutions must harness resources to address the growing cases of unethical use of intellectual literary works of authors by the students in their assignments and projects. They should do so approaching the challenge by providing enabling policies, technology and cooperation. The policy must include training and embedded programmes for ODeL students, educators and other relevant stakeholders to ensure uniformity and promotion of coordinated approach to ethical teaching and learning. The findings of this investigation have provided list of different commercial and open source anti-plagiarism software that are being used in universities, this list can be probed further by examining the weaknesses and strengthen of the software for likely purchase or subscription by the ODeL institutions who are yet to have one for their students works and educators. The students must be encouraged through designed curriculum activities to improve their writing skills and acknowledge works done others by citing their contributions in acceptable ways. The study recommended that ODeL institutions must know the facilities and features of the appropriate anti-plagiarism software that are suitable for the type of programmes they run and therefore, must select the right anti-plagiarism software. They must avoid especially when they have the means to do so, open source plagiarism checkers due to their low quality and capacity. The challenges associated with using anti-plagiarism software by the ODeL students must be addressed through policy formulation, orientation and training of both the students and the tutors on how to use plagiarism software. Work load should be reduced for both students and tutors, programmes should be designed to address the challenge of literature or information synthesis and citation.

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