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Does Open Access Prevent Plagiarism in Higher Education?

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Abstract

Plagiarism is a dilemma in higher education. However, it is no longer obscure and has grown easier to expose. This is possible due to the web-based e-publication environment where access to and the scrutiny and use of information content is escalating. The authors use their experential knowledge, observation, content analysis, and extant literature to argue that Open Access increases the detection of plagiarism and discourages it in higher education if the stakeholders' roles are known and fulfilled. This presentation is divided into five parts: 1) Conceptualising and contextualising plagiarism; 2) An overview of the Open Access concept; 3) Does Open Access avert plagiarism? 4) The role of stakeholders; and 5) A case study of the University of Zululand (UNIZULU).

Keywords: Plagiarism, Plagiarism Stakeholders, Open Access, Higher Education, University of Zululand, South Africa

Introduction

The advantages of ease of access to and use of web-based information resources in the scholarly environment can be levelled by its disadvantages; in particular, the ease with which these same tools can be used to plagiarise, e.g. 'copy and paste' tool. However, while this scholarly challenge could be concealed in the 'print only' publishing environment for centuries, largely without noticing, the detection of plagiarism is becoming easier in the e-publishing environment. Yet even in the electronic publishing environment, such detection can be time-consuming and costly if e-records are not placed in an Open Access (OA) environment where they rapidly appear in the public domain upon publication. In this paper, it was argued that although plagiarism is still a dilemma in higher education, it is no longer obscure and has grown easier to expose, largely due to the web-based e-publication environment where access to and the scrutiny and use of information content are escalating. Experiential knowledge is often used by authors, researchers, assessors and information users and observations, content analysis and extant literature to argue that Open Access increases the detection of plagiarism and discourages it in higher education. This can only occur if the stakeholders' (e.g. librarians, faculty/teaching staff, higher education management, and students) roles are known and fulfilled. This presentation is divided into five parts: 1) Conceptualising and contextualising plagiarism; 2) An overview of the Open Access concept; 3) Does Open Access avert plagiarism? 4) The role of stakeholders; and 5) A case study of the University of Zululand (UNIZULU).

Conceptualising and Contextualising Plagiarism

Plagiarism is widely understood to be the unethical use of other people's publications, by claiming the content or parts thereof as one's own, without paying tribute to or recognising the sources from which the information was obtained, either at all or properly. However, the definition extends beyond publications; it describes unethical behaviour that involves "the act of taking another person's writing, conversation, song, or even idea, and passing it off as your own. This includes information from web pages, books, songs, television shows, email messages, interviews, articles,

artworks or any other medium" . Based on several definitions of plagiarism by Roger Clarke (2006) and others (Lukashenko, Anohina and Grundpenkis, 2007; Purdy, 2005; Singh and Ramenyi, 2016), plagiarism is associated with stealing, purloin, appropriating, imitating, copying, cheating, fraud, kidnapping, abducting, deriving, re-using, paraphrasing, manipulating, alluding, etc. Clarke's (2006) analysis of the definitions and their usage group them into the following categories:

(1) *Publication:* the presentation of another person's material, work, or idea. A precondition for plagiarism is that the new work is made available to others; personal notes are not an issue;

(2) *Content:* the presentation of another person's material, work, or idea. A precondition for plagiarism is that some part of the new work is derived from someone else's prior or contemporaneous work;

(3) *Appropriation:* the presentation of another person's material, work, or idea as one's own. A precondition for plagiarism is that the claim of originality of contribution is either explicit or implied by the manner of presentation; or the presentation may be such that the reader is reasonably likely to infer the work to be an original contribution; and

(4) *Lack of credit given:* the presentation of another person's material, work, or idea as his or her own, without appropriate attribution. A precondition for plagiarism is that the reader is not made aware of the identity of the originator, nor of the location of the original contribution.

But even here, we must be conscious of the complexities of plagiarism (Clarke, 2006; Purdy, 2005; Singh and Ramenyi, 2016), which can be 'competitive plagiarism' or 'institutionalised plagiarism' (Purdy, 2005:286-287) or 'ghostwriting' (Singh and Ramenyi, 2016) that are not always well understood. Clarke's (2006:97-103) representation of arguments against plagiarism, based on ethical, instrumentalist, legal, copyright and counter arguments, focuses on practicality to authors and readers, the role of imitation in learning and innovation, and alternative cultural interpretations of plagiarism; provides solid arguments for a better understanding of the complexities of plagiarism which cannot be ignored. Plagiarism in higher education largely occurs unknowingly due to negligence, carelessness, ignorance, arrogance, and apathy among members of the academic community. There is a lack of knowledge of how to use information resources or other people's information for teaching, learning and research, correctly or properly. Plagiarism is forbidden in higher education (see also Singh and Armenia, 2016) for at least the following three reasons:

> Firstly, this phenomenon is in contradiction to the process of learning which demands from a learner to take certain intellectual and physical efforts in order to acquire knowledge and skills necessary for the further social and professional activity.
>
> Secondly, plagiarism reduces the value of a qualification conferred by the educational institution. Thirdly, it demotivates other students to work independently and to put efforts to learning in case of impunity of plagiarism.
>
> (Lukashenko, Anohina and Grundspenkis, 2007).

The absence or invisibility of a plagiarism policy can be a major drawback in the fight against plagiarism in universities. In May 2013, a content analysis was conducted for this paper-based on the policies posted on the Internet by 23 South African universities, and concluded that the majority of the universities had a plagiarism policy. Institutional responsibility for the policies varied, but all the universities underlined that plagiarism was the responsibility of all the stakeholders. All the policies targeted students and teaching staff, and nearly all the policies included infringement penalties, detection software, marketing and publicity, declaration of compliance, and guidelines, including library guides. However, only a few policies articulated the library's role clearly.

An Overview of the Open Access (OA) concept

The Budapest Open Access Initiative's (BOAI, 2002) definition of OA was used as "free availability on the public Internet, permitting any users to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal, or technical barriers other than those inseparable from gaining access to the Internet itself. The only constraint on reproduction and distribution, and the only role for copyright in this domain, should be to give authors control over the integrity of their work and the right to be properly acknowledged and cited" (BOAI, 2002; IFLA 2003). Open Access initiatives have rapidly evolved in recent years, as outlined in the "Timeline of the Open Access Movement", initiated by Peter Suber and taken over in 2009 by the Open Access Directory, which captures and shows the enormous growth of the OA movement from past to present. There is significant contribution to the timeline by libraries, universities, journal publishers, and professional organisations and societies. The most comprehensive report on OA content on the web is by the Directory of Open Access Repositories (DOAR) and the Open Access Directory (OAD). The figure and the table below provide some relevant insights. For example, out of 2993 repositories reported by DOAR worldwide in 2016, Africa repositories accounted for less than 4.4%. For example, Europe, accounted for 44.2%; Asia, 20%; North America, 19.1%; and South America 8.9%.

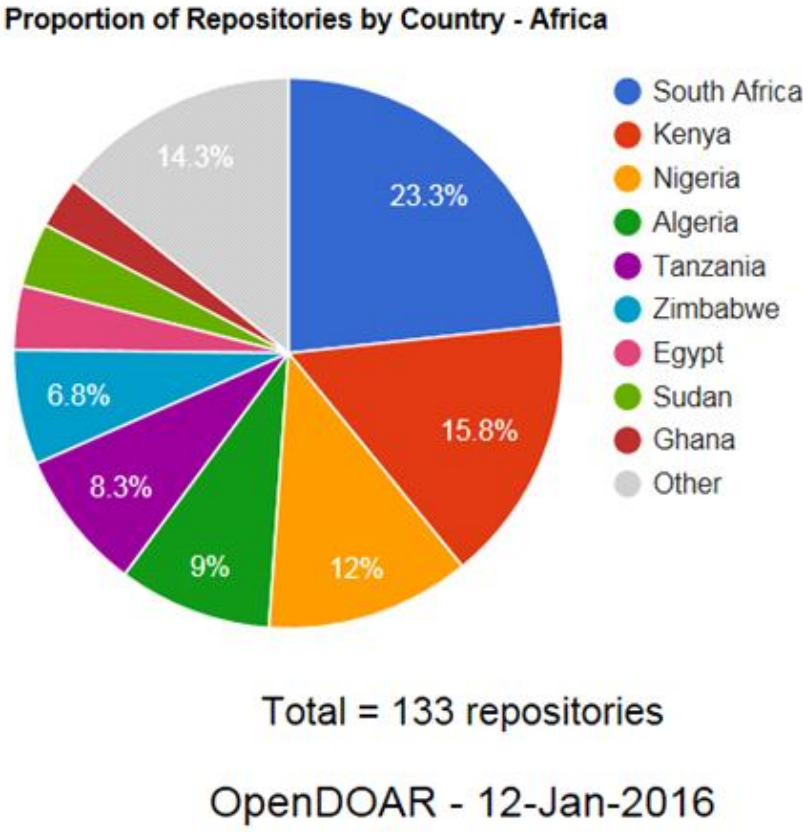

Figure 1: Proportion of Open Access Directories by Country in Africa

Table 1: Open Access Directories in South Africa

Repository name	Country	Recs.	Num. Pubs	Confs	Theses	Unpub	Other	URL Base	Software
African Higher Education Research Online	South Africa	929	+	+	+	+	+	OAI	[Unknown]
CSIR Research Space	South Africa	7125		+			+		DSpace
CUT Institutional Repository	South Africa	246			+				DSpace
Digital Innovation South Africa	South Africa		+	+	+	+	+		[Unknown]
Digital Knowledge at Cape Peninsula University of Technology	South Africa	2413			+	+		OAI	DSpace
DUT IR	South Africa	1254			+				DSpace
KovsieScholar	South Africa	372			+			OAI	DSpace
North-West University Institutional Repository	South Africa	14032			+			OAI	DSpace
OpenSALDRU	South Africa	658		+		+		OAI	DSpace
OpenUCT	South Africa	10602			+			OAI	DSpace
ResearchSpace@UKZN	South Africa	10996			+		+	OAI	DSpace
Rhodes eResearch Repository	South Africa	4096		+	+			OAI	EPrints
Scientific Electronic Library Online - South Africa	South Africa	1074							SciELO
SEALS Digital Commons	South Africa	12955			+		+	OAI	ContentPro
South Africa Data Archive	South Africa	171					+	OAI	DSpace
Stellenbosch University SUN Scholar Repository	South Africa	56423		+	+		+	OAI	DSpace
SUNDigital Collections	South Africa	4327	+				+	OAI	DSpace
TUT Digital Open Repository	South Africa	1233			+			OAI	ContentPro
UCT Computer Science Research Document Archive	South Africa	720	+	+	+	+		OAI	EPrints
UJDigispace	South Africa	12855			+			OAI	DSpace
Unisa Institutional Repository	South Africa	14880			+	+	+	OAI	DSpace
University of Fort Hare Institutional Repository	South Africa	446			+				DSpace
University of Limpopo	South Africa	938			+				DSpace
University of Pretoria Electronic Theses and Dissertations	South Africa	8774			+			OAI	ETD-db
University of the Free State ETD	South Africa	1280			+				ETD-db
University of the Western Cape Research Repository	South Africa	1319		+		+		OAI	DSpace
University of Zululand Repository	South Africa	1227			+				DSpace
UPSpace at the University of Pretoria	South Africa	37654		+	+		+	OAI	DSpace
UWC Theses and Dissertations	South Africa	3124			+			OAI	DSpace
VUT DigiResearch	South Africa	81			+				DSpace
Wits Institutional Repository on DSPACE	South Africa	12016			+	+		OAI	DSpace

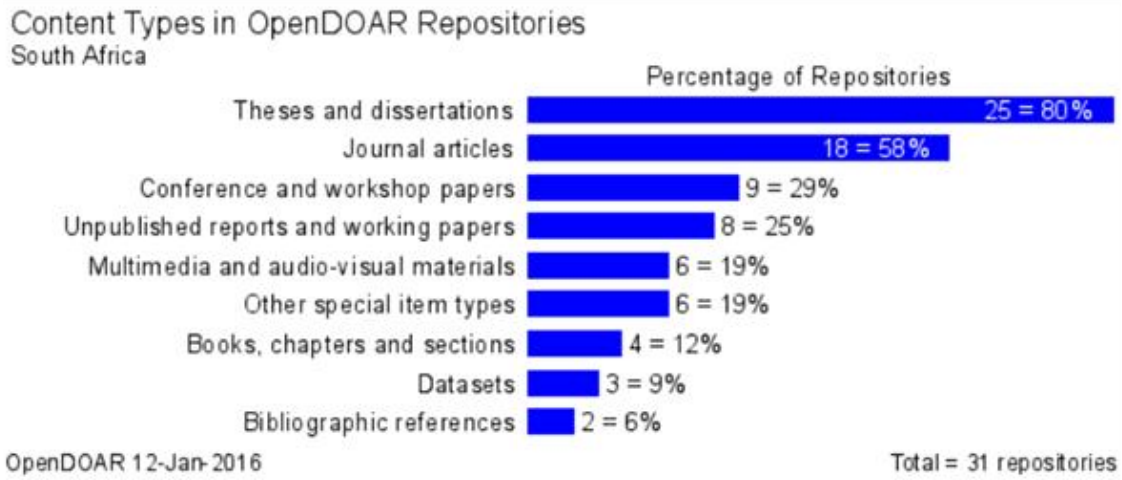

Figure 2: Content Types in Open DOAR Repositories in South Africa

Search engines such as Google, Yahoo and others provide the largest repository of OA content that is accessible to most people in the world, free of charge, on the Internet. Plagiarised information in such content can easily be detected. But, as Brandt et al. (2010) rightly observe, "OA documents are typically hidden from traditional web crawlers in so called OA repositories", meaning that access is restricted. McCown et al. (2006) noted that "21% of the resource identifiers were not indexed by any of the search engines" such as Google and MTN. Brandt et al. (2010) further indicate that "The usage of existing OA repositories is beneficial for any plagiarism detection process."

Does Open Access Avert Plagiarism?

This question can be answered with both a 'yes' and a 'no'. The escalating presence of e-resources on the web, while enjoyed by knowledge and information communities worldwide, is also condemned for enabling plagiarism to occur more easily, mainly because full records or parts of records can be rapidly transferred from one document to another. In higher education institutions, students can easily copy and paste entire papers or parts of documents that do not belong to them into their essays without proper attribution of authorship, leading to plagiarism. There is also an increase of 'online paper writing services' or 'ghostwriting' (Singh and Ramenyi, 2016) where students buy readymade papers, thesis and dissertations and present them for assessment as their original work (Janssens and Tummers, 2015). However, while it is difficult and laborious to detect such plagiarism in print-only information environments where most documents are not exposed to public scrutiny (as happens with e-resources).It could be argued that Open Access increases chances of detecting and averting plagiarism. Open Access e-resources, such as those retrieved from search engines, are available and accessible to the public worldwide; therefore, any person can read them and detect plagiarism. Authors take more precautions when publishing research output or posting their publications in an Open Access platform. It is also increasingly easy to detect plagiarism by using document resemblance detecting software programs (Chew and Blackey, 2010) such as Turnitin, Docoloc, EduTie, Eve2, CopyCatch, Glatt, Moss, JPlag, wordCHECK, etc., when full text records are available in an Open Access environment such as those represented in DOAR's burgeoning Institutional Repositories (IRs). Among the various text resemblance detecting software programs, Turnitin seems to be the most popular with the highest rating (Janssens and Tummers, 2015; Ison, 2014).

Arguments that link Open Access to plagiarism can be divided into three categories. The first category suggests that OA make it easier for plagiarism to occur (e.g. Abrizah, 2009; Brandt et al.,2010). Brandt et al. (2010) report that: "In nearly all recent examples of copyright violations in scientific, academic and scholarly areas, the original

source of the plagiarised passages can be found on the Internet." However, detecting such cases has also become easier to do precisely because of the Internet.

The second category argues that OA averts or prevents plagiarism, or makes the detection of plagiarism much easier. Such studies (Brandt et al., 2010) recognise that: "Freely available documents, however, bear the risk that they may easily be used by third persons without paying attention to the copyright of the original authors…. Nevertheless, the unrestricted accessibility of OA publications is their main advantage, especially with regard to copyright protection. Owing to their free availability, OA documents are also well-suited for automatic plagiarism search services." Increasingly, studies related to plagiarism detection software tools, development and usage (Brandt et al., 2010; Purdy, 2005; Lukashenko, Anohina and Grundspenkis, 2007; Chew and Blackey, 2010) show that internet-based resources, such as OA based-resources, make the detection of plagiarism much easier. Purdy (2005:276) explains that: "Plagiarism detection services that rely on the Internet allow instructors to search for this visual proof, to test their students' papers to determine if they include language copied directly from other sources." But he is also concerned about the legality of remote server-based Plagiarism Detection Software (PDS), such as Turnitin and EduTie, which keeps records of submitted documents in their servers without author consent, and the infallibility and reliability (Lukashenko, Anohina and Grundspenkis, 2007) of the PDS tools. Singh and Armenia (2016) suggest that more emphasis should be accorded to prevention than to the text resemblance checkers.

The burgeoning number of institutional repositories of theses and dissertations in Open Access spaces can deter plagiarism, as both authors and affiliate institutions take more precautions to avoid embarrassment. In the past, theses and dissertations were not easily accessible to the public unless one visited libraries or repositories where they were kept or stored 'gathering dust'. If a researcher from one part of the world or another country, region or institution, copied parts of a thesis/dissertation outside their area of jurisdiction, detection of plagiarism would be difficult. This would require persons who are familiar with the publications, such as theses/dissertations, and who can access and scrutinise the publications, to establish their originality. It is also reasonable to argue that only a few people who read documents pay close attention to their details, as often occurs when authors read for publication or for research, when examiners examine theses and dissertations, or reviewers review publications, or when students read for examinations to secure good grades. Open Access to e-theses and e-dissertations in IRs makes detection of plagiarism much easier, as more people would read them and are likely to sound the alarm if the/their work has been plagiarised. A recent study by Icon (2015) referring to the influence of the Internet on plagiarism among doctoral dissertations produced quite convincing results to support this argument. In the study, David Icon collected:

> Empirical data to investigate the potential influence the prevalence of the Internet has had on significant higher education artefacts by comparing dissertations written prior to widespread use of the Internet with those written in a period in ubiquitous Internet …. [Based on]. Doctor of Philosophy (PhD) dissertations written in English and published by accredited universities in the U.S. and Canada. A sample of 384 dissertations were analysed by Turnitin plagiarism detection software. The mean similarity indices for pre-Internet and post-Internet eras were 14.5 and 12.3, respectively. A Mann Whitney U test (Mdn = 13, U = 30,098.5, $p < 0.001$) indicated that the differences between groups were significant, however opposite that has been purported within the exigent literature. When comparing the counts of dissertations for each time era considering those with plagiarism versus those that had little/no evidence thereof, there was no statistically significant difference (?2 [1, N = 368] = 2.61, p = 0.11). The findings of this study suggest that the Internet may not be significantly impacting the prevalence of plagiarism in advanced levels of higher education.

Interestingly, the results from this study have not significantly departed from his earlier study where he concluded that:

> Although dissertations from online institutions were slightly more likely to involve plagiarism, the traditional schools had more extreme cases of plagiarism. Thus, the notion that online education is more prone to plagiarism is not well supported. However, across both institution types, more than half of all dissertations contained some level of plagiarism. (Ison, 2014)

The third argument belongs to those who feel that OA both increases and thwarts plagiarism. This is the compromising argument: "If plagiarism is easier to commit because of the Internet, it is also easier to catch because of the Internet" (Purdy, 2005).

The Role of Stakeholders

Stakeholders are the individuals or the organisations involved with or affected by an activity or an occurance. In this case, stakeholders include libraries, HEIs' administration, students, and staff, in particular academic/teaching/research staff. Librarians understand "that detection is not the main objective in a campaign against plagiarism. Rather, universities should concentrate on educating students as to what constitutes plagiarism and how to avoid it" (Burke, 2005). This view is supported by Wiebe (2006) who acknowledges that:

> It is more in-tune with the overall vocation of librarianship to educate students and advocate awareness of why plagiarism is wrong and how they can avoid it. ……Ignorance and lack of education are enemies of academic integrity - both of which can be greatly diminished with the help of proactive librarians and other faculty working together towards a common goal.

Most South African academic libraries are taking the lead in educating the academic community about the learning/research process by providing different services, including user education/ information literacy courses; workshops on e-resources, referencing, plagiarism, PDS such as Turnitin, etc.; online library guides and tutorials; and library displays, referencing and reference management software (e.g. Endnote, Refworks, etc.).

According to Schopfel (2013), "Part of the grey literature, electronic theses and dissertations (ETDs) represent a growing segment of open, available content in institutional repositories (IR) where they contribute to the impact and ranking of their institution." It is noted that most of the IRs listed in DOAR contain ETDs. Libraries have a major role to play in enabling Open Access (Mutula, 2011) and averting plagiarism. Mutula (2011) suggests that libraries should: provide access and support; digitise print collections and develop collections for Open Access; provide enabling infrastructure; offer digital and Open Access literacy; develop institutional repositories; network with stakeholders; provide copyright and intellectual property literacy; and provide leadership for OA. While libraries can initiate and provide leadership for OA and plagiarism, full cooperation and collaboration with relevant stakeholders is vital if they are to succeed.

The major roles of higher education institutions, according to Suber (2007), include: installing an OAI-compliant EPrint Archive; encouraging staff to deposit their scholarly work, both pre-print and post-print, in departmental or institutional repositories; training digital librarians who may assist as 'proxies' in self-archiving; and developing self-archiving, copyright/plagiarism and Open Access policies (Suber, 2007). For example, at Walter Sisulu University in South Africa, a draft Senate Plagiarism Policy under'Joint responsibilities of Supervisors, Co-supervisors and postgraduate students' states that:

> Postgraduate students and their respective supervisors need to take note that the electronic versions of the final research outputs will be posted on the intra and internet, facilitating access by a wide audience, and any proved challenge or allegation of plagiarism or unprofessional referencing will pose a challenge on their qualifications, including withdrawal of the qualification in cases where such qualification is already awarded, and

> simultenously cause disrepute to the supervisor, co-supervisor, department, school, faculty and postgraduate studies in particular and WSU in general.
>
> Authors publish to be read, and are important for Open Access and averting plagiarism. They should sound the alarm whenever they detect plagiarism of their work, or in the works of others. They should also conform to copyright conventions, launch and support OA and plagiarism initiatives and publications, and deposit publications in Open Access spaces.

Lecturers/Faculties/Academics interact with publications on a regular basis in their capacity as educators/instructors, authors, and assessors/ examiners/moderators of students and colleagues' academic and research output. They can detect, prevent, condemn and discourage plagiarism.

Students are vital as well. They need to develop critical thinking and their own/original views about what they learn. They also need to learn how to avoid plagiarism by participating in plagiarism workshops, which are available to them at their respective universities/colleges, and comply with institutional plagiarism policies.

A Case Study of the University of Zululand (UNIZULU)

University of Zululand (UNIZULU) is rural based, was started in 1960 and is one of the 25 public universities in South Africa. It is a comprehensive university that is expected to offer university education in a variety of disciplines, offer flexible exit points, balance teaching and research, combine vocational and traditional university education. The University offers undergraduate certificate, diploma, bachelor as well as postgraduate honours, master and doctorate degree qualifications in four faculties: Arts (humanities and social sciences); Commerce, Administration and Law; Education; Science and Agriculture. The student population in 2016 is 17,693, including 1183 postgraduate students. There are 48 academic departments at the university and 800 staff members, including 367 academic staff. UNIZULU is ranked among the top 100 of the 1450 African universities by most of the widely known five international university ranking agencies. The University mode of teaching is contact. The research portfolio at the University is held by the Deputy Vice Chancellor Research and Innovation who is also the Chair of University Research Committee (overseeing research at the University), Research Ethics Committee and Higher Degrees Committee whose functions are captured at the University research website. The university library hosts its institutional repository.

The University of Zululand has two major research policies that deal with plagiarism. (i)Ethics Policy - Policy and Procedures on Research Ethics and (ii) Policy and Procedures on Managing and Preventing Acts of Plagiarism--This policy recognises that:

> Plagiarism constitutes a breach of academic integrity and compromises and undermines the values and processes by which knowledge is created, shared and evaluated. Such breach not only casts suspicion upon the integrity of the individuals involved, but also damages the reputation of the academic community. The University of Zululand ("the University", "UNIZULU", "the Institution") therefore has a responsibility to uphold academic integrity and to promote trust in scholarly work undertaken at the Institution and to prevent plagiarism within the Institution (section 1).

The necessity of the policy is highlighted as follows:

- To get a shared and clear understanding of the nature of plagiarism .
- To emphasise the need to educate the University community about plagiarism and its impact on them and the Institution.
- To provide for monitoring, detection and prevention mechanisms and processes.
- To establish uniform procedures for dealing with instances of plagiarism that comply with the principles of natural justice.

- To contribute to academic integrity within the Institution.
- To improve the quality of research at UNIZULU .
- To augment the attributes of the University's graduates.
- To enhance the University's academic reputation (2012).

The plagiarism policy is linked to other associate policies such as Research Ethics Policy, Higher Degree Policy, Student Disciplinary Code, and Staff Disciplinary Code.

The university library conducts regular plagiarism awareness and prevention workshops to staff and students. At the end of the workshops, perceptions of participants regarding plagiarism are obtained.

Methodology

The University of Zululand library provides several workshops to staff and students that include plagiarism. A case study was conducted during UNIZULU research awareness month through open- ended questionnaire distributed to participants after the plagiarism workshops in September 2015. One hundred and eighty six copies of the questionnaire were distributed. The participants were mixed (academics -12; postgraduate students -14; and undergraduate students, 160). Ninety copies of the questionnaire were returned. They were required to answer the following questions: 1) Are you aware of the UNIZULU plagiarism policy? 2) If you know that a plagiarism/text resemblance checker (e.g. Turnitin) will be used on your work will you still plagiarize? 3) Do you think that you are still likely to plagiarise when you know that your work will appear in the public domain (e.g. on the web/ internet or IR) in Open Access (OA) for everyone to access (full text) and use? 4) Do you think OA can prevent plagiarism? and 5) What would you like to know about plagiarism?

Findings

The findings are highlighted include awareness of plagiarism, knowledge of plagiarism, prevention of plagiarism, etc.

Awareness of UNIZULU Plagiarism Policy

This paper has acknowledged the necessity of plagiarism policy in a university. Out of the 90 respondents to the question posed, 58 indicated that they were aware and 29 were not, while three did not respond. Some of the their responses were as follows: Learned about it during the presentation; It is fair and encourages students not to plagiarise; Now it's worthy to know it has serious consequences which can damage your reputation as a researcher; Teaches us to acknowledge the authors; and stop plagiarism. From the variety of responses there seems to be a general awareness of the UNIZULU plagiarism policy from this sample.

Awareness that a plagiarism/text resemblance checker (e.g. Turnitin) will be used on your work

When respondents were asked if they would still plagiarise despite awareness of plagiarism/text resemblance checker, most of the respondents indicated that they would not plagiarise if they were aware that a text resemblance checker would be used on their work, 32 indicated 'No' with comments, while 54 without comments, and four did not respond. This may suggest text resemblance checker could reduce plagiarism. This confirms views in related studies reported elsewhere in this paper (e.g. Purdy, 2005; Ison, 2015). Some of the responses were: No, why should I not unless I am in sane but everything was thoroughly explained; No, it may ruin my career; No, it's prohibited when conducting research; No, I am aware of the Turnitin system, it is clear that the work submitted will not be considered.

Knowledge of plagiarism

The concept of plagiarism is not widely understood as reflected in this study. The respondents identified areas of training need on plagiarism as: the penalties that a researcher may be given after plagiarism is detected; Unintentional plagiarism like how do you plagiarise from the previous studies; and how to avoid plagiarism; How to use Turnitin and learn different

referencing styles;

Knowledge that work will appear in public domain

Respondents were asked if they would still plagiarise despite the fact that their work would appear in the public domain (e.g. on the web/internet or IR) in open access (OA) for everyone to access (full text) and use, the respondents overwhelmingly agreed that they would not plagiarise if they knew that their publication would appear on an online Open Access space with 51 indicating saying 'No' without comments, 32 with comments, and seven did not respond. More than three respondents in each case cited bringing shame to themselves, the supervisor and the institution; getting caught and prosecution as the reasons why they would not plagiarise. Some of the responses are: No, it is important to acknowledge the work of others; No, because it will be seen in public and it will be easier to spot plagiarism; No, because that can destroy my entire academic attributions; It is not easy to plagiarise since the authors of written information or articles will be aware of you plagiarising; No, because still I will get caught; No, you can be prosecuted; No, never; It will give me, my supervisor and university a bad name.

Prevention of plagiarism through OA

The main question in this study referred to whether Open Access could prevent plagiarism. The respondents agreed that OA could prevent plagiarism. For example 62 agreed, 11 disagreed, 7 stated maybe, 10 did not respond. Some of the responses were: It will be easier to access information and also get new ideas so that they can develop their own; It exposes those who plagiarise; One may reduce or do not plagiarise at all due to the fact that the open access is able to expose all work submitted with plagiarism; Everyone will be aware to whom the work belongs; Because no researcher will try to steal someone's information without any acknowledgement; Because people will access your work and see that you have stolen other people's work. While most acknowledged that open access prevents plagiarism by most respondents, at least four respondents noted that training on correct ways of using information was essential.

Conclusions

At the beginning of this paper, it was argued that OA can avert, prevent or reduce plagiarism and validated this with some examples (e.g. Brandt et al., 2010; Purdy, 2007). It was acknowledged that many more studies and observation in our work spaces would support this, as demonstrated in the UNIZULU case study. Studies supporting this view or argument from PDS developers and providers admit that detecting plagiarism would be considerably easier and more effective when records are accessible in full text on the Internet in OA space. There are also strong arguments in favour of what could be called 'prevention is better than cure'(Singh and Ramenyi (2016). Also recognised as the compromising argument - alluded to earlier - succinctly summarised by Purdy (2006) that: "If plagiarism is easier to commit because of the Internet, it is also easier to catch because of the Internet." First, Higher Education Institutions (HEIs) need to develop comprehensive plagiarism and OA (IRs, etc.) policies that embrace the rights and responsibilities of all the stakeholders.

Secondly, OA documents hidden from traditional search engine crawlers on the Internet and only accessible through institutions' intranet cyberspace, sometimes with additional password restrictions, do not qualify as OA documents in the way that OA is defined. This concern is increasingly contradictory and confusing the spirit of OA as reflected by Prost and Schöpfel (2014) in their article "Degrees of Openness: Access Restrictions in Institucional Repositories" where they were concerned regarding "whether this lack of openness is temporary due to the transition from traditional scientific communication to open access infrastructures and services, or here to stay, as a basic feature of the new and complex cohabitation of institutional repositories and commercial publishing". Such restricted access limits the detection of plagiarism.

Thirdly, Internet-based OA documents (such as ETDs, including retrospectively digitised print theses, online conference proceedings, etc.) provide growing opportunities for plagiarism awareness, detection, and prevention if documents are accessible

in full text format. Stakeholders should work together and focus more on awareness, education and training to prevent plagiarism, as it is the view that most plagiarism in HEIs occurs because of ignorance and apathy, largely among students.

Lastly, plagiarism detection software tools are highly useful and helpful in OA document environments. They play a major role in the detection of plagiarism if used wisely. However, the wisdom of using them is curtailed if full text records are only scrutinised by one or a few individuals, and not made available to the greater public.

The case study affirmed that plagiarism policy is essential in a university. Plagiarism could be significantly reduced if students are aware that text resemblance checker (e.g. Turnitin) would be used to verify their work. There was an overwhelming admission by the respondents that they would not plagiarise if they knew that their work would appear on an online open access space/platform and that open access could prevent plagiarism. The study identified training needs on plagiarism and emphasised the importance of awareness of all aspects of plagiarism to support its prevention. The conclusion is similar to Singh and Ramenyi's (2016) suggestion in that "it is also important for the issue of plagiarism and ghost writing to be discussed more openly and regularly within universities". This study has provided background knowledge of plagiarism and open access and university environment in Africa that can support future debates, research, education /training and policy on OA and plagiarism.

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