Turning Usage and Its Impact on Academic Integrity and Honesty of General Sir John Kotelawala Defence University (KDU)

T.C. Ranawella  
Senior Assistant Librarian,  
General Sir John Kotelawala Defence University, Sri Lanka.  
thanuja@kdu.ac.lk

ABSTRACT

Higher educational institutions are expected to adhere to academic integrity and honesty in their mission for gaining and disseminating knowledge. But the advancement of new technology is one of the negative impacts on it because easy and open access to information on the web encourages students to use other’s work and claim as theirs. This is against the academic integrity and honesty which is termed as plagiarism. Therefore, KDU has subscribed to Turnitin anti-plagiarism software to control and maintain the academic integrity and honesty among the university population. Analyzing administrator’s statistics, this paper intends to find out the Turnitin usage and its impact on academic integrity and honesty of KDU. The results indicate that the percentage of active instructors and usage of Turnitin is comparatively increased year by year. Similarity level was high at the beginning and became less gradually. Hence the academic culture is influenced among the users and it shows a positive impact on academic integrity and honesty of the university. Finally, the researcher recommends to conduct training sessions for staff and students on handling techniques of Turnitin as well as how to use it as a tool for academic writing to maintain academic integrity and honesty.

Keywords: Academic integrity, Academic Honesty, Plagiarism, Anti-Plagiarism software, Turnitin
INTRODUCTION

Advancement of technology brings considerable impacts in all disciplines including education because the information on the web could be accessed easily by everyone. Ledwith and Rísquez (2008), also confirm it. According to them, advancement of technology accomplished academics to improve their critical thinking and it supports self-learning of the students. However, according to Batane (2010), the negative effect of this outstanding chance is that it challenges the academic integrity and honesty of higher educational institutions. He also said that several dishonesty problems come up and vary within the academic field and copying other’s writing on the web and admitting it as their own to be ranked which is termed as plagiarism as one of dishonesty done by the scholars. Therefore, as a product of educational dishonesty, plagiarism could be enclosed because the act of cheating and violating rules of analysis that deserves severe.

Academic Integrity and Honesty

According to policy documents of Calcutta International School (2016), “Academic Honesty means performing all academic work without plagiarism, cheating, lying, tampering, stealing, giving or receiving unauthorized assistance from any other person or using any source of information that is not common knowledge without due acknowledgement” (p.6). Lipson (2008), explain it clearly. According to him, for the work done by someone on his/her own has actually done it; If he/she relies on someone else’s work or use someone else’s words, he/she has to quote them openly and accurately and also he/she has to cite them, too; if a person present research material, he/she has to present them fairly and truthfully. It means that if the research involves documents, data, or the writings of other scholars not following academic honesty, it violates the above principles. Therefore, if a person shows someone else’s word/s or work as his/her own, he/she is guilty of plagiarism and it believes that he/she has no academic honesty. If higher standards of honesty are not maintained, lecturers are defrauded, the society itself is poorly
served and students are unfairly treated. Therefore, the formal responsibility of the academia of all faculties of a higher educational institution is to maintain the academic standards of honesty. Therefore, every higher educational institution must introduce some kind of anti-paganism software to maintain the higher stand of quality of their research.

**Turnitin Anti-Plagiarism Software**

According to the information given in the Turnitin User Guide (2018), Turnitin is an internet based text-matching commercial plagiarism detection software program. Submitted documents are electronically compared with billions of web page contents as well as the work of other students whose papers have also been submitted to Turnitin database repository of works in the past. It also compares documents which include thousands of publications, journals, and periodicals with the aim of identifying plagiarism. After comparing the submitted document as mentioned above, a similarity report is generated with a summary of matching. In this report, the similarity level is shown as a percentage (the proportion of matching text compared with the total number of words in the submission). According to the user guide, the higher the percentage, the greater the amount of text in the submission that is highlighted as matching compared to information in Turnitin’s repositories.

Turnitin Administrator is the authorized person to create and manage Turnitin instructor accounts. Administrator’s homepage displays a list of all users’ accounts and he/she has the authority to access those users’ accounts. He/she also has the facility to take statistics on Turnitin usage. To use the facility, an instructor account has to be created. Normally, Teaching Assistants could be appointed as Instructors who could add assignments to the Turnitin software to check the similarity level. An instructor who is assigned to a class and has been involved in some activity is considered as an active instructor in a particular period.
**Research Problem**

Undergraduate and postgraduate students at KDU who need to do research for the fulfilment of their degrees have a tendency to plagiarize sometimes even without knowing due to the advancement of Information Communication Technology (ICT), the workload, lack of awareness about what plagiarism is and other reasons. Therefore, to develop academic integrity, honesty and quality of research, KDU must have some kind of tool to detect plagiarism in its academic publications including student work and should implement some kind of mechanism to make the staff and students aware of the availability of such tools. Having identified the importance of academic honesty in the online environment and a market survey, KDU Library took the leadership and subscribed to the Turnitin anti-plagiarism software in 2015 recognizing it as the most suitable anti-plagiarism software in order to help the users to maintain academic honesty and quality of their research activities.

According to the data obtained through administrator statistics, it was observed that the usage of the Turnitin anti-plagiarism software was at a minimal level during the year 2017, as only 2182 originality reports were generated. This means KDU has spent Rs. 310.00 per a similarity report which is a very high cost. Therefore, it is necessary to increase the usage of the software to a considerable extent to do justice to the huge portion of money spent on the subscription.

**Objectives of the Study**

Objectives of the study are as follows.

- To identify the usage of Turnitin anti-plagiarism software by the academic staff of the KDU.
- To identify the impact of Turnitin anti-plagiarism software in maintaining academic honesty of the KDU.
- To propose strategies to increase the use of Turnitin anti-plagiarism software.
LITERATURE REVIEW

New technological advancements massively influence the field of education because most of the information available on the internet permits access to everyone around the world. This makes teachers encourage their students in independent learning. Therefore, a flood of information on the internet makes it easy and convenient for both teachers and students by supporting learning activities. Though this is an amazing chance to learn, it has negative side effects as well because it challenges the academic honesty. As a result, various dishonesty issues such as cheating, plagiarism and falsification of information come up in the educational field. In other words, introduction of the digital devices, the internet, and online learning and testing have influenced the rate of cheating, plagiarism and falsification among tertiary students.

Nova and Utami (2018) and Joyce (2007), in their studies also identify that technological changes is one of the contributory factors for plagiarism. Other than that, Joyce (2007) listed “greater diversity in the student population and rapid expansion of tertiary education as two other contributory factors for plagiarism” (p.195).

Nova and Utami, (2018) define “students take other’s work and claim as theirs” as plagiarism which is against academic ethics and honesty. Analyzing how academic integrity and plagiarism are treated in the Australasian context, Joyce (2007), identify four categories of plagiarism: ideas, sources, plagiarism of authorship, and word-by-word plagiarism (p.189).

According to Ledwith and Ríquez (2008, p.372), free and commercial software such as Turnitin, My DropBox, EVE, Wcopy Find, and WordCHECK provide a tool to prevent Internet-based plagiarism, and most of them mainly offer the facility to measure the plagiarized level in peer-reviewed documents to give reports on the similarity between a student’s work and a material publicly accessible online (p.372).
Nova and Utami, (2018) also identify Turnitin, as one of the plagiarism detection software widely used in many universities, and has been claimed as an effective software for detecting plagiarism. In another study by Hill and Page (2009), they attempted to analyze the efficiency of two plagiarism detection software: Turnitin and Safe-Assign. They found that “Turnitin had the highest overall success at plagiarism detection with an 82.4 percent detection rate” (p. 169). According to them, plagiarism detection is a kind of tool for writing ethically by self-evaluation of one’s own work to include academic honesty. They also said that, using an anti-plagiarism software by students to check their own papers is a proactive solution to prevent plagiarism.

Turnitin is not only a plagiarism detection software but also a writing tool. John and McCann (2010) identify Turnitin as an educational tool and they argued that Turnitin is a deterrent to plagiarism rather than a tool for detecting plagiarism. They are of the view that if students use Turnitin anti-plagiarism software to identify the different types of plagiarism done by themselves when doing their own work, that will improve their writing skills and also reduce the chance of plagiarism. It is expected that supervisors of students should use it and encourage the students to use it to develop their work honestly. (p.53).

Making a significant contribution to the area of research, Jenson and De Castell (2004) emphasize the need for policing of intellectual property boundaries. They mentioned that "Turnitin serves as an interesting ‘object lesson’ in the ‘fallacy of intellectual autonomy’, and helps to make apparent more troubling epistemological and ethical implications of technologies for education reconceived within a ‘knowledge economy’" (p.312). They assessed the adequacy of the capacity of the software and analyzed the capacity of Turnitin in detecting plagiarism and securing academic integrity.

Heather (2010) shows a loophole in Turnitin in detecting plagiarism. According
to him, “plagiarism detection software package works by extracting the text from the document being checked and analyzing the text with sources available on the internet as well as other databases” (p. 649). He demonstrated that one could submit his/her work passing plagiarism detection using tactics which he demonstrated in his article.

There are many books, research and other publications on Library Science which covers many aspects such as usage, awareness etc. of plagiarism in the Sri Lankan content, but publications on academic integrity and honesty are rare and limited. Kodikara and Kumara (2015) conduct a survey on plagiarism among students of University of Moratuwa, Sri Lanka, and they recommended special programmes to raise awareness on plagiarism and academic integrity for research students.

The above literature tried to identify the usage, features and loopholes of Turnitin anti-plagiarism software, but the present research is distinct from the above. This research was carried out at KDU in order to find out to see whether there is an impact of Turnitin anti-plagiarism software against academic integrity and honesty.

METHODOLOGY

Context of Investigation

In 1980, General Sir John Kotelawela Defence Academy (KDA) was inaugurated under the KDA Act No 68 of 1981 for the purpose of producing service officers with well-developed intellectual capacity for the Tri-forces. Later, its scope of operations has been extended by several subsequent amendments. By KDA (amendment) Act No 27 of 1988, the academy was elevated to university status, and on 11th October 2007, it was renamed as General Sir John Kotelawela Defence University (KDU). In 2010, degree programs were opened for fee-levying students and now KDU operates as an institution of higher education with nine faculties which awards undergraduate
and postgraduate degrees in various academic disciplines for both civil and military students. Being a degree awarding institution, KDU should also ensure a high-quality, learner-centered educational experience through undergraduate and postgraduate programs. For that, KDU should maintain the quality of their research to uplift the standard and the recognition of the university. This is why KDU must consider academic honesty as the foundation of the university.

With the above expansions of KDU, faculty library concept was introduced to provide a better service for the students. With this concept, faculty librarians were appointed for each and every faculty and they are responsible to build up a close relationship with the faculty members to fulfil all the library requirements of the faculty which resulted in a strong link between all the faculties and the library. Therefore, the library of KDU is an essential part of the education system of KDU and can be recognized as the heart of the university. Because of that, the KDU library has a big opportunity to play a vital role in maintaining the standard and recognition of the university, and could also act as the focal point of maintenance of academic integrity and honesty of KDU which can be done by introducing a reputed anti-plagiarism software, educating the importance of academic honesty and conducting training programs to the KDU staff and students.

**Data Collection**

A survey method was employed to identify the usage of Turnitin anti-plagiarism software and its impact on the academic honesty of the KDU and analyzed the statistics of administrator account such as instructor accounts, originality reports generated and similarity level of uploaded reports related to May 2015 to April 2018 on semester basis.
Sample

The population of this study consisted of all the academic and academic supportive staff members who had a Turnitin Instructor Account. All active instructors in a semester were included in the sample. The population and the sample vary from semester to semester due to the number of instructor accounts available with the subscription. Since 2\textsuperscript{nd} semester of 2015 to 1\textsuperscript{st} semester of 2016 population was 58 and sample sizes were 25, 30, 23 consequently. Then from 2\textsuperscript{nd} semester 2016 to 3\textsuperscript{rd} semester of 2017 population was 68 and sample sizes were 29, 43, 47, 68 and 52. Lastly, 1\textsuperscript{st} semester of the year 2018 population was 228 sample size was 49. Data analysis was done by using the statistics available in the KDU Turnitin administrator accounts. Further, interviews were conducted with heads of all departments (HOD) in order to get clarifications about statistics and to propose strategies to increase the use of Turnitin anti-plagiarism software. The variables measured in the study were instructor accounts, active instructors, similarity reports and similarity level. Microsoft Excel was used to enter and analyze data quantitatively.

DATA ANALYSIS

Interview data show that KDU has three academic semesters starting from January and usually student research projects are done in the third semester in all faculties. Therefore, usage of Turnitin is comparatively high in the third semester in all three years. They also said that most of the students as well as some staff members do not know the importance and seriousness of plagiarism and the consequences of violating the intellectual property rights. The data were tabulated using statistics available in the administrator account of three years starting from second semester in 2015. Data were analyzed semester wise.
Instructor Accounts

Figure 1 below gives the number of instructor accounts created during the semester. There are 250 academic and academic supportive staff members in all faculties. Since subscribed package had very few instructor accounts, KDU was able to create only 58 (23.2%) instructor accounts up to first semester of the year 2016 and 68 (27.2%) instructor accounts up to third semester of the year 2017.

Since subscribed package had very few instructor accounts, KDU was able to create only 58 (23.2%) instructor accounts up to first semester of the year 2016 and 68 (27.2%) instructor accounts up to third semester of the year 2017. Having identifying the importance, renewal for 2018 was done with more instructor accounts. With the latest renewal, KDU was able to create 228 (91.2% out of total number of staff members) instructor accounts which show significant improvement.
Active Instructor Accounts

Figure 02 below indicates semester counts of unique active instructors during the last nine academic semesters. If an instructor allocated to a class that has had any activity in the Turnitin system during the time period, that instructor is identified as an active instructor. Accordingly, number of active instructors in the third semester is higher than other semesters in all three years. As mentioned by HODs, this is because students do their research projects in the third semester.

Figure 2: Active Instructor Accounts

Figure 2 also highlights that, more than 50% (number of active instructors among the total number of instructor accounts) of instructor accounts were activated in all semesters of year 2015 to 2017. HODs confirmed that this is mainly because most of the instructors were using Turnitin anti-plagiarism software to check similarity level of students’ research projects.
However, in 1st semester, 2018 active percentage of instructors’ accounts is only 21.5%, this is due to unavailability of research projects submitted in this semester. When the same semester in each year is compared, there is a growth in number of active instructors which means usage of Turnitin anti-plagiarism software had increased annually.

Originality Reports

Figure 03 below shows the semester wise totals of submissions to Turnitin anti-plagiarism software from KDU in the last 3 years (9 semesters). According to it, number of similarity reports generated increased annually in every semester. During 3rd semester, 2016 it increased by 134.5% compared to the 3rd semester in 2015. During 3rd semester, 2017, it increased by 290.7% compared to the 3rd semester in 2016.

![Figure 3: Originality Reports Generated](image)

The usage of Turnitin software had increased due to the requirement of similarity report that should be submitted with the research project which is a mandatory requirement
of Faculty of Engineering (FOE) and Faculty of Law (FOL). When considering other semesters, a growth can be seen. This also reflects the usage of Turnitin is increased but not sufficiently, when the number of undergraduates as well as postgraduate students in KDU is considered.

**Similarity Level of Originality Reports**

The similarity level is defined as per the percentage of plagiarized material in the documents as showed in the students’ originality report. Number of reports generated in each similarity level in semester wise is presented in Figure 04. It compares the percentages that each value contributes in a similarity level to a total. According to data, from 2nd semester 2015 to 1st semester 2016, the level of similarity of the generated reports was very high. During that period, very few reports (less than 20% of the total reports generated in the semester) were in the range of 0% -24%.

![Figure 04: Similarity Level of the Reports Generated](image)

From 2nd semester 2016 to 1st semester 2018, the level of similarity of the
generated reports was comparatively low (around 50% of the total reports generated in the semester were in the range of 0% -24%). The level of similarity showed a higher value in the introductory stage of Turnitin software. This indicates that the level of similarity reduced when students become aware of the Turnitin software and with the implementation of the mandatory Turnitin requirement of the faculties. Therefore, it shows that, Turnitin anti-plagiarism software has a positive impact in maintaining academic integrity and honesty at KDU.

CONCLUSIONS

The findings of this study show that the similarity level of the student writing has decreased after introducing the Turnitin anti-plagiarism software. Therefore, it is evident that Turnitin has a positive impact on maintaining the academic integrity and honesty of KDU. The results also show that the number of instructor accounts increased with time. At present 91.2% of the KDU academic and academic support staff has Turnitin instructor accounts which indicates that almost all the staff is aware of the availability of Turnitin anti-plagiarism software at the library. At the same time, the study shows that the number of active instructor accounts are increasing annually. Though usage of Turnitin anti-plagiarism software had increased annually, the study found that it is not being fully utilized by the staff. Therefore, there is a requirement for improvement of the usage of this anti-plagiarism software.

RECOMMENDATIONS

Based on the findings of the study, the following recommendations are made;

• The researcher recommends to conduct awareness programs on academic integrity and honesty to students and academic staff of the university and to conduct training sessions to make them familiarize with the operating procedures of Turnitin anti-
plagiarism software as a tool for academic writing.

- Students have to be taught to think about the validity of sources and how to give credit by citing sources. If a student is found not following guidelines, the teacher should speak to him/her.
- To maintain the quality of the papers produced, the researcher recommends mentioning the percentage of similarity in the referee reports and supervisors’ recommendations in all research work.
- It is also recommended to take a policy decision as a university to check all the student project reports, articles, theses and dissertations for plagiarism. Disciplinary action should be taken for academic dishonesty, e.g. awarding zero marks for papers with a higher percentage of similarity. If this is implemented, the staff and students will definitely be compelled to use anti-plagiarism software and that will help the university to maintain higher academic integrity.
- Finally, the researcher recommends upgrading the present Moodle version of KDU to make it compatible with the subscribed Turnitin version and pay the extra fee relevant to Turnitin key for Moodle. This will facilitate students to submit their theses, dissertations and reports online.

REFERENCES

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