Deterring Plagiarism: A Study of Steps Taken By PEC University of Technology, Chandigarh

Seema Vasishta   **Nav Jyoti Dhingra**   **Maninder Kaur Dhanda**

Abstract

Plagiarism is an act of fraud, involving both stealing someone else's idea and lying about it afterward. Plagiarism has emerged as one of the most troublesome issues bothering academia. Plagiarism detection tools are beneficial for the academic community to identify plagiarism and avoid such illegitimate activity. The availability of electronic forms of umpteen documents on the Internet has made it easier to plagiarize than ever before. Detecting plagiarism is of much importance as it can help in keeping the academic integrity and giving due credit to the original author. The present paper defines plagiarism and highlights its impact on academia. This paper also describes some of the plagiarism detection tools available for plagiarism checking and steps taken by the PEC University of Technology against plagiarism.

Keywords: Plagiarism, Plagiarism Detection Tools, Turnitin, PEC University of Technology

1. Introduction

With the availability of vast amount of information on the Internet, there is an increased focus on plagiarism and ethical issues in research. However there is lot of ambiguity in defining plagiarism and how to combat it. The focus is shifting towards plagiarism detection with first step being the clear definition of the concept. Plagiarism could be understood as a common manifestation of academic dishonesty. Carroll (2007) defined plagiarism as submitting someone else's work as your own. In other words not giving due credit of an idea, phrase or writing to the original creator can be termed as an act of plagiarism. It is unlawful and unethical to copy a few words or a full paragraph(s) without proper acknowledgement. Even ideas belonging to a person are his intellectual property and stealing that view or using it as one's own is plagiarism. Taking

someone's idea without any credit to the original author is a crime as it deprives him of any benefits. Building new ideas from old ideas, using existing components and combining them in new ways, might be creativity, not plagiarism (Becker, 2001). But while doing research, usually new ideas are built upon or supported by the ideas of other people and a proper credit must be given to writers or the sources quoted.

Plagiarism has emerged as one of the most troublesome issues bothering academia. A significant attention is being paid to plagiarism in response to high volume of plagiarism being detected. However plagiarism is a very complex area. The availability of electronic forms of umpteen documents on the Internet has made it easier to plagiarize than ever before. It has made available a vast amount of information available at the click of mouse, but there is no way of restricting a person from unauthorized copying of that work and presenting it as one's own original work. Bombaro (2007), however, emphasized that it is very important to understand that

using seemingly free information, without attribution constitutes theft of intellectual property. In higher education academia, plagiarism is considered as a serious offence of academic dishonesty leading to ethical as well as legal consequences.

2. Impact of Plagiarism

Plagiarism is rising at steadfast rate due to a number of factors such as lack of awareness among the researchers. Anything available through the digital world is considered to be free of any legal or intellectual property issues by many researchers leading to immense growth of plagiarism. Another factor could be the fierce competition to excel among the faculty.

Plagiarism is the worst example of misconduct in research and it is not acceptable in any of its forms.

Because of plagiarism, it's not only the researchers' but also the reputation of the institute to which they belong is at stake. So there is an urgent need to make every researcher aware of the consequences of this undesirable practice and a strong mechanism to curb this menace.

3. Detecting Plagiarism

Academic dishonesty including plagiarism is a chronic problem, which needs immediate combat. Detecting plagiarism is of much importance as it can help in keeping the academic integrity and giving due credit to the original author. As the internet has helped to provide easy access to information, it has also been endowed with some tools to detect plagiarism. These tools range from free online services to commercially available software packages.

Table :1 Free Services To Check For Plagiarism

S. No.	Name	URL
1.	Viper plagiarism scanner	http://www.scanmyessay.com/
2.	Plagiarismchecker.com	http://www.plagiarismchecker.com/
3.	Plagiarism-detector	http://plagiarism-detector.com/
4.	Paperrater	http://www.paperrater.com/plagiarism_checker
5.	Plagtracker	http://www.plagtracker.com/
6.	Plagium	http://www.plagium.com/
7.	Copyscape	http://copyscape.com/
8.	Seesources	http://www.plagscan.com/seesources/

Table :2 Paid Services To Check For Plagiarism

S. No.	Name	URL
1.	Turnitin	http://turnitin.com/
2.	Plagiarismdetect	http://plagiarismdetect.org/
3.	Canexus	http://www.canexus.com/eve/index.shtml
4.	WriteCheck	http://en.writecheck.com/
5.	CheckForPlagiarism	http://www.checkforplagiarism.net/

4. PEC University of Technology, Chandigarh

One of the most prestigious technical institutes of the region, The Punjab Engineering College was founded as the Maclagan Engineering College, Lahore way back in the pre-partition days. After partition in 1947, the institute was shifted to Roorkee (India) and was renamed as East Punjab Engineering College. In the year 1950, the word "East" was dropped and it came to be known by its popular name–PEC (Punjab Engineering College). Towards the end of December 1953, the institute shifted to its present campus in Chandigarh to function under the Govt. of Punjab. In 1966, with the formation of Union Territory of Chandigarh, the institute came under the control of the Chandigarh Administration. In October 2003, the Govt. of India notified the Punjab Engineering College as a Deemed to be University.

The institute offers eight four-year undergraduate programmes leading to the degree of Bachelor of Engineering (B.E.) in the disciplines such as Aerospace Engineering, Civil Engineering, Computer Science & Engineering, Electrical Engineering, Electronics & Electrical Communication, Information Technology, Mechanical Engineering, Materials and Metallurgical Engineering; and Production Engineering. Twelve two-year programmes leading to the degree of Master of Engineering (M.E.) are offered in the disciplines such asCivil Engineering (Highways),Civil Engineering(Irrigation and Hydraulics), Civil Engineering (Structures), Civil Engineering (Environmental Engineering - An Inter disciplinary Programme), Computer Science & Engineering, Computer Science & Engineering (Information Security)– a recently started self-supported programme, Electrical Engineering, Electronics Engineering, Electronic Product Design & Technology (in collaboration with

C-DAC, Mohali), Industrial Materials & Metallurgy, Mechanical Engineering and Production Engineering. The institute has a regular as well as part-time Ph.D programme leading to the degree of Doctor of Philosophy (Ph.D) in areas of Engineering, Basic Sciences and Management. The Ph.D programme was started at PEC in 2006 and the total no. of students admitted have increased from 25 in 2006-2007 to 101 in 2010-2011.

PEC University of Technology has been honoured with Outstanding Engineering Institute (north) award by the STAR NEWS National B School Awards. These Awards recognize the institutions that are innovative, modern and industry related in their curriculum in engineering and technology. Moreover, PEC University of Technology has been ranked 23rd amongst Top 75 Engineering Colleges in India by Outlook MDRA. Competition Success Review-GHRDC Engineering College Survey 2011 has rated PEC University of Technology, Chandigarh at 7th (overall) and 5th under Top Engineering Colleges/ Institutes of Super Excellence in India.

5. Research @PEC

PEC University has a long tradition of pursuing excellence in teaching and research in science and technology. During the last ten years, since it achieved the Deemed University status, about 202 research articles have been published in indexed international/national journals and international/national conference proceedings (Scopus data). The Ph.D programme was started at PEC in 2006 and the total no. of students admitted have increased from 25 in 2006-2007 to 101 in 2010-2011. The institute encourages its faculty to undertake research in the field of Science and Technology through Ph.D programme, sponsored projects and inhouse funded research

projects At present, faculty along with research scholars are engaged in sponsored project of 2 to 5 years duration funded by Government agencies. Some of these agencies are Department of Science and Technology, Department of Information Technology, Indo-French Centre for the Promotion of Advanced Research, CSIR, AICTE, SASE and Chandigarh Administration.

6. Plagiarism Detection Policies Adopted at PEC

PEC is continuously struggling to update their policies while taking plagiarism seriously. Policies could be reactive while considering cheating as a serious academic offence; Proactive being to find and reduce plagiarism using suitable software. Plagiarism being the least desirable practice in the academia, few steps taken by PEC are mentioned below:

a) Plagiarism Detection Software: plagiarism detection is not an easy task but with the use of remedial measures such as installation of plagiarism detection software, quality in research can be ensured. As already discussed, many anti-plagiarism software are available to control increasing cases of plagiarism and low quality research, PEC as a remedial measure has provided access to anti-plagiarism software Turnitin. PEC University subscribed to this tool in the year 2014, with the 100 user licenses. It is one such software, which is being successfully used at global level to cross-check a huge database for identifying plagiarized portion.

The Turnitin plagiarism prevention system checks assignments or research papers submitted by students to identify similarity with other sources such as books, journals, websites and previously submitted student work. The system may be used by tutors to identify instances of possible plagiarism and may also be used by you as a learning tool to check your own work to check you have referenced correctly. It can sometimes be used simply as a means of electronic submission of course work.

The system is fairly easy to use. The students submit their work digitally to it, either by themselves or through instructors and the work is then scanned. The system then produces a report on how much of the material is copied, and the source of the copied material. Turnitin uses three databases for content matching which includes 45+ billion web pages crawled, 400+ million archived student papers and 130+ million articles from 110,000+ journals periodicals & books. Another advantage of this software is that it supports high quality writing by proper feedback.

7. Turnitin's Purpose

➨ To deter plagiarism

➨ To hold students accountable

➨ To determine the similarity of text to sources

➨ To enhance teaching and student learning

7.1 Features of Turnitin

➨ Reduce Plagiarism with Originality Check: Instructors can easily overlay OriginalityCheck feedback with GradeMark for a more comprehensive evaluation.

➨ Save Time with QuickMark®Sets: Save time and provide better feedback by quickly dragging standard or custom marks and comments directly on the paper.

➨ Talk to your Students with Voice Comments: Guide students with personalized audio feedback that conveys your 'tone' and clarifies QuickMark comments.

▸ Grade Better with Rubrics: Convey clear expectations and speed grading with pre-loaded Common Core-aligned rubrics---or create your own.

▸ Give Great Feedback with General Comments: Write a broader, in-depth comment to give students overall feedback about their papers.

▸ Turnitin supports 19 languages

7.2 Benefits

▸ Provides resources to assist in teaching research and writing skills

▸ Deters plagiarism before it happens; provides documentation if it does

▸ Saves time in the investigation of the originality of student work

▸ Allows for efficient verification of works cited

b) Formal Training Programme: For the proper utilization of the software, formal training programme for faculty and research scholars are being organized by the PEC University from time to time.

c) Formulation of Global plagiarism Policy: policy on acceptable academic practices that constitute plagiarism has been formulated. It would act as guideline for checking of plagiarisms and its acceptance criterion in Ph.D and Masters' theses/dissertations.

d) Academic Integrity: Students are being encouraged to write in a good academic style and adopt innovative ideas. They are being taught the concept of plagiarism informally during tutorials, its various forms and how to check it. Ignorance can't be taken as an excuse at higher education level.

e) Obligation of faculty: Faculty has a great responsibility of nurturing among students, the ability to understand Intellectual property (IP). In the guidelines for checking plagiarism, faculty is to report the case of student plagiarism to the disciplinary board. Also the guide has to take affidavit from the researcher regarding no use of plagiarized material. The guidelines also have the instructions to use proper citation style which is IEEE style and researchers are advised to cite the used references in that format only and avoid being prey to the ghost of plagiarism.

f) Electronic Copy Submission: it has been made mandatory to submit the research project in electronic form and efforts are being made to prepare an in-house database of ETD and published articles of both faculty as well as research scholars. This would be developed as Institutional repository to highlight the research output of PEC University.

g) Ethical group discussion: if caught of conducting cheating deliberately or unknowingly, researchers are encouraged to have ethical group discussion with councilor to prevent plagiarism in future.

h) Information Literacy Programme: Plagiarism is an outcome of 'Information Literacy' (Koovakkai, 2011) and it is described as an expression that depicts the range of skills required for effective handling of information (Vasishta, 2008). Plagiarism can be prevented by creating awareness about the concept. This model is being made an integral part of the Information Literacy programme meant especially for the first year students. International rules regarding plagiarism are discussed with the students.

i) Developing Writing Skills: In this context two different writing skills, as proposed by Alveteg (2008) are important.

▸ One is the skill of independent writing i.e. writing with one's own words.

▸ And the skill of referencing.

A course of 30 hours duration on communication skills for students of PEC University of Technology is being run in batches of 25-30 students. The course contents include modules on basics of communication skills, importance of listening, improving speaking skills, preparation for an interview and group discussion, CV writing, making power Point presentations and Technical report writing.

8. Conclusion

Plagiarism being an unethical practice is jeopardizing the quality of higher education. It should be detected and discouraged at all levels by encouraging judicious use of information. With the help of software and various available technologies, plagiarism detection is quite easy. Also a proper pattern of acknowledging needs to be followed for that the original writer is benefitted by proper credentials. PEC University has formulated some strategies for detection and prevention of plagiarism. But these policies need continuous review and monitoring so as to keep academic dishonesty at a bay for coming future.

References

1. Alveteg, M. (2008). How tackle cheating and plagiarism in engineering educations? http://www.csc.kth.se/~kristina/utveckling2008/papers/Alveteg.pdf

2. Becker, L. C., & Becker, C. B. (Eds.). (2001). Encyclopedia of Ethics: PW(Vol. 3). Taylor & Francis.

3. Bombaro, C. (2007). Using audience response technology to teach academic integrity:"The seven deadly sins of plagiarism" at Dickinson College. Reference Services Review, 35(2), 296-309.

4. Carroll, J. (2009). Plagiarism as a threat to learning: an educational response. In Assessment, learning and judgement in higher education (pp. 1-17). Springer Netherlands.

5. Culwin, F., & Lancaster, T. (2001). Plagiarism issues for higher education. Vine, 31(2), 36-41.

6. Koovakkai, D. (2011). Diagnosing Plague: Tools and Techniques For Detecting Plagiarism. http://ir.inflibnet.ac.in/handle/1944/1629

7. Lin, C. H. S., & Wen, L. Y. M. (2007). Academic dishonesty in higher education—a nationwide study in Taiwan. Higher Education, 54(1), 85-97.

8. Vasishta, S. (2008). Knack of Information Literacy for Effective Utilization of Electronic Information Resources. In book entitled 'Recent Trends in Technical Education' edited by R. Hariharan, Macmillan Publishers India Ltd., New Delhi, 2008, pp 595-610.

About Authors

Ms. Seema Vasishta, Sr. Librarian, PEC University of Technology, Sector-12, Chandigarh.
E-mail: seema313@gmail.com

Dr. Nav Jyoti Dhingra, AC Joshi Library, Panjab University, Chandigarh.
Email: navi.pul@gmail.com

Mr. Maninder Kaur Dhanda, Sr. Librarian, PEC University of Technology, Chandigarh.
Email: maninder_lib@yahoo.co.in