Investigating the Interplay of Technology and Plagiarism: A Study of English Language Learners' Beliefs

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ARTICLE INFO	ABSTRACT
  Corresponding Author: Aamir Aziz **Email:** mianaamiraziz@gmail.com OPEN ACCESS	*Presently, the relationship between technology and plagiarism has developed differently and entered into a new phase. We find not only articles on plagiarism in academic journals but also observe this issue in everyday academic life of students too. One of the issues is the complex relationship between technology and plagiarism. This study uses the mixed model approach for conducting the research which analyzes whether there exists a direct relation between technology and plagiarism, so far as the issue of plagiarism is concerned. This correlational analysis takes into account the student's beliefs and aims to shed light on the reciprocal relationships between technology and plagiarism in that how technology can both cause and prevent plagiarism including the factors which ensures the prevalence of plagiarism. Research has been conducted using the technological determinism approach by Thorstein Veblen (1992) which is based on the notion that technology plays a deterministic role in shaping students' behavior, so the occurrence of plagiarism as well and this lens analyzes the intertwined world of technology and plagiarism. With the help of questionnaire survey, using the data from the technological determinism approach, the data were collected from English Language learners at a university and were analyzed through SPSS 23.0. The findings indicate that that there do not exist a direct and linear relationship between technology and plagiarism so far as the educational setting is concerned. Considering all these facts this paper is useful for understanding how technology indirectly affects the ways in which plagiarism is committed and detected and understanding technology as one of the factors contributing in the occurrence of plagiarism.*

Introduction

Today, technology has undoubtedly advanced education on a broad scale and does not only facilitate the access to information but, it also facilitates the development of complex kinds of plagiarism and undermines conventional concepts of academic honesty. Given the scope of the improvements, it is easy to gloss over the potential drawbacks that technological advancements pose to the students. Some have called plagiarism a literary theft. Plagiarizing is akin to stealing the intellect of another person. At times, plagiarism occurs because of ignorance, sloppy authorship, or lack of knowledge about proper sourcing. Sometimes, it is done purposefully (Stowers, 2011). There has been a dramatic shift and changes with the advancements of the digital age. Some of the most significant shifts have occurred in the ways that information is created, disseminated, and accessed (Martin, 2005). So, on the one hand, technology may serve as an asset in the struggle against plagiarism on the other hand, technology can also enable newer and intricate forms of plagiarism, which threatens established norms of academic integrity.

In today's digital age, technological advancements have tremendously facilitated not only access to information but also the ability to create and share information as well as the broadcast of both (Forsyth, 2018). While many positive changes have evolved from these adjustments, others, such as the debilitating problem of plagiarism in academic contexts, have emerged as a result. There is no denying that technological advancements have made it simpler than ever to gain access to data and to publish one's own creations (Nykyporets, 2023). This study is oriented towards the beliefs of English language learners concerning the relationship between technology and plagiarism because the relationship nonetheless exists by taking technology as independent variable this study looks at whether it has a direct effect on the dependent variable plagiarism or not according to technological determinism approach. Text-spinning, paraphrasing, and translation plagiarism are just some examples of the new forms of plagiarism that have emerged as a result of the technological advancements. The relationship between technology and plagiarism is thus complex and multifaceted, with advantages and disadvantages for avoiding copyrights and preserving academic integrity.

Students' skills in preventing plagiarism effectively calls for analyzing the technology which facilitate them to do so and that goes beyond the ordinary sort of analysis in that this is the comparative analysis in which technology has been looked upon as a double-edged sword and this analysis also suggests a method for understanding the consequences of utilizing the advancements of technology this way. Given that there isn't a clear one-to-one relationship between the similarity index and technology, this kind of analysis becomes complicated (Anirudh et al., 2023).

Anyhow, the technological determinism approach has been utilized in this research as a theoretical framework for conducting the research which posits that technological advancements have influenced the prevalence of plagiarism in students' academic life.

Problem statement

The intensity of plagiarism in the academic life of students has been increasing over the past few years in relation to the technological advancements. There have been some effective attempts in reporting the extent of plagiarism in the work by the technological advancement such as Artificial Intelligence tools. However, these interventions have yet to have any significant effect on turnout because of the complex and multifaceted relation between technology and plagiarism.

Objectives of the study

- • To determine the role of technology in enabling and preventing plagiarism at once in academic setting for university students.
- • To have an insight on the relationship between technology and plagiarism from two lenses.
- • To test the technological determinism theory among students and to check its significance.

Research Questions

1. Which factors influence the complex and multifaceted relationship between technology and plagiarism in academic setting for students?
2. How technological advancements have influenced the prevalence of plagiarism?
3. How technology is both a tool and a challenge to academic integrity?
4. Does technology shapes attitudes towards originality and intellectual property?

Literature Review

The key constructs involved in this study include technology, plagiarism, and particularly how these two interact with the students' beliefs.

Technology

Technology is a term with origins in the Greek "technologia" whereas techne means craft and logia means saying. Technology is a broad concept that deals with use and knowledge of tools and crafts and how its use affects the ability to control and adapt to the social and physical environment (Karkoulian, Sayegh, & Sayegh, 2024; Sibt-e-Ali et al., 2024). Technology is the use of the scientific tools to solve problems or to make task easier (Encyclopedia Britannica, 2024). In an educational context, technology includes digital tools like the internet, software, electronic devices that assist in solving a task. However, it also brings challenges such as ensuring ethical use and maintaining academic integrity (Stone, 2023).

Technology in education has completely altered the traditional learning paradigms to create more tailored learning solutions, instant access to knowledge, and students and teacher's interactivity (Ayoub/Al-Salim & Aladwan, 2021). Nevertheless, this evolution to digital platform entails other issues that are essential in promoting academic integrity. The power of obtaining a great amount of information over the web can lead the student to cheating or plagiarize either deliberately or by mistake. Further, the concern of originality is further complicated by the development of AI tools that can as well write work that looks like it was written by a student (Holden, Norris, & Kuhlmeier, 2021).

Plagiarism

Plagiarism is usually defined as copying of others' work that deceives a third party about the authorship of the work (Rumanovská et al., 2024). Plagiarism is the act of taking someone else' work, ideas or words and presenting them as one's own work without proper acknowledgement (University of Oxford, 2024). Plagiarism includes passing off someone else's work as ones' own, taking someone else's words or ideas and not giving them credit, not putting a quote in quotation marks, giving wrong information about where a quote came from and changing words but using the source's sentence structure without giving credit. There are many other definitions of plagiarism listing the fundamental concept that plagiarism is the unauthorized use of another

person's work. This misconduct is an appalling issue in the academic context and undermines learners' honesty in their academic work. Lokke describes it as a form of academic malpractice and frame academic integrity. But this misconduct can be committed with or without the knowledge of the individual. In other words, this misconduct can be deliberate, and it can also be accidental. It remains a major unethical and scholarly misconduct, as well as a clear violation of the concept of academic integrity and creativity. Counting different types, plagiarism covers turning to the direct text copying without quotation marks or references, paraphrasing without giving the proper credit, and using one's own material without citation. The Purdue Online Writing Lab (OWL) provides the clearest explanation of what plagiarism is, defining it as 'the act of using someone else's ideas or words and pass them off as personal creations without citing the source of that information (Velmurugan, 2024).

Students' Beliefs

Students' beliefs refer to the ideas, attitudes, and perceptions that student hold towards their learning processes, including their views on technology, and their understanding of plagiarism (Gulumbe, Audu, & Hashim, 2024). Such beliefs shape students' attitude towards the use of the digital resources, their attitudes to cheating, and, therefore, their likelihood of engaging in plagiarism, either intentionally or unintentionally. For instance, students' beliefs could include whether technology is the easy access to information or whether with tools such as plagiarism detection software, e.g., Turnitin, help discourage plagiarism which enhances ethnicity. These beliefs also comprise students' knowledge (or lack) regarding permissible and prohibited acts when it comes to plagiarism in a digital environment such as copying existing information from the Internet or rewording ideas without citing the sources, using a considerable number of resources without acknowledging these in the piece of writing. In other words, "students' beliefs" referred to the perceptions that students hold through the relationship between technology and plagiarism while using technology resources in their academic works responsibly and with due regard to ethics (Lei, 2024).

Students' beliefs are important in this study because in an educational setting students mostly confront the issue of plagiarism. So, based on their direct experience with the issue they can better elaborate the relationship of technology and plagiarism. Students, unlike faculty or researchers encounter the experience of digital resources daily when completing assignments and or working on projects and doing research work, they often are exposed to situations where the differences between original work and plagiarism may emerge. That is why their beliefs about technology and plagiarism are directly pertinent to the issues underlying plagiarism in academic context.

Moreover, the students during the process of developing the patterns of the academic behavior are more vulnerable to effects both constructive and destructive of the information technologies. They need to understand whether they think technology helps or hinders them in doing things differently, as well as whether they know what is considered plagiarism on the internet, in order to inform meaningful interventions, policies and learning (University of Chicago, 2023).

Through analyzing students' beliefs this study identifies how students individually understand and cope with plagiarism in a technological environment which in turn will show how the guidance can be adjusted to reflect on students' reality and struggles. This approach brings about an aspect of close to reality solutions to the researcher hence improving the impact of the research findings in improving the aspect of academic integrity among students.

The relationship between technology, plagiarism, and students' beliefs has gained considerable attention among researchers in the educational setting. Due to the increasing ratio of technological tools, the incidence of plagiarism has become a cause for concern in as far as academic integrity is concerned. This literature review aims at exploring the literature on the aspects of how technology affects plagiarism with special reference to the students' perception.

Students' beliefs and plagiarism

A critical issue is the lack of understanding among the students to distinguish what is considered as plagiarism. As such, some students may argue that copy, paste, or swapping out some words, or not using quotation marks do not amount to plagiarism while other argue that it is acceptable to copy from the internet since they are using the digital resources and not the printed materials such as books. Students also consider that stress and demand to get good results overshadow ethical factors (Aziz & Ghani, 2017; Aziz & Shakir, 2023; Zhai et al., 2024).

Patton (2004) suggests the positive results of using the anti-cheating software in large undergraduate courses and in particular, he noted that electronic tools can close the "sophistication gap" between the students. Nevertheless, these tools may not remove the issue to its roots and some students will still cheat if they think that technologies cannot identify them. That is why student behavior remains influenced by the fact that plagiarism detection systems are not foolproof (Encyclopedia Britannica, 2024).

Townley and Parsell (2004) found that plagiarism associated with the Internet use should not only be blamed on new technologies, but also on decline of values. They emphasize the importance of the building a culture of intellectual integrity within educational settings.

Technology and its role in plagiarism

According to Lovell (1998) and Bozeman (2000), technology is defined as knowledge that is achieved for the principal purpose of using it to ease the tasks for the learners. Therefore, in an academic setting, the internet, search engines or any software can either enhance or hinder plagiarism. Students have a perception of these tools in regard to aids that facilitate the identification of valuable information. But, this kind of availability complicates the issue of lines between appropriate methods of acknowledging and cheating (Alessio & Messinger, 2021).

Some students consider technology as a tool to facilitate learning but this perception results in the students offering a work with plagiarized content if they do not have any knowledge on what constitutes learning that involves the use of appropriate academic writing standards. Students' beliefs about the proper use of technology in learning environments may significantly influence student's academic behaviors particularly regarding the use of digital information (Eaton, 2023).

Institutional policies and digital literacy

The institutional policies significantly influence students' perceived attitude towards plagiarism (Gulumbe, Audu, & Hashim, 2024). The institutions with strong and specific anti-plagiarism policies together with giving students adequate helps on the principles of ethical practice experience reduced levels of unfair practice. This will be especially so because students come to educational institutions with different levels of computer literacy that will influence their ethical use of the technology.

The learner's digital literacy level is a contributing factor to proper citation and ethical use of digital sources Garner et al., 2012). On the other hand, the students who are not well known with these tools tend to adopt the details of plagiarism unintentionally. Digital literacy, therefore, fits the mold of a critical remaking force in chiming how students approach technological application within their academic endeavors.

Stowers (2011) in another study also noted that institutions have to embrace practices that check cases of plagiarism especially brought by the use of the internet. Some of the programs that have to be initiated include the offering of workshops in citation techniques, academic honesty and including technology use policies in the curriculum. The study shows that even though, technology, facilitates plagiarism, appropriate teaching of digital ethics reduces its incidences.

Another research was conducted by Sohrabi et al., (2011) attempted to explore how access to Internet technology contributes to plagiarism problems from the perspective of university students and Survey data from 180 university students suggest that the personality characteristic of conscientiousness had a negative effect on using information technology to commit plagiarism.

Naqvi (2013) conducted research in which she pointed out the fact that technology is not only promoting plagiarism rather is it capable of providing a solution too. Results showed that there is a profound need to promote academic integrity through awareness workshops, sessions on referencing, and exhaustive practice in summarizing and paraphrasing.

Ireland and Byrne (2011) conducted research with outcomes suggesting that students arrive at university with a variety of understandings of plagiarism and that the success of the technologies used in plagiarism education largely depends on how the activities are integrated in the curriculum.

Factors such as increased pressure on students, poor academic integrity awareness, lack of up-to-date academic honor codes, and the unethical application of AI tools are prime contributing factors to plagiarism (Sozon & Alkharabsheh, 2024).

This literature review shows that while technology fosters plagiarism, it also guards against it to a certain extent by also providing tools that check plagiarism status. Even though technology can help instructors find instances of plagiarism, it at the same time assists students to use information that is in circulation in the wrong way. The reason is that acceptability beliefs of students concerning the technologies, their experience and the culture of the learning institution determine academic dishonesty. It also indicates that though technology plays a role in the occurrence of plagiarism, it is not the only reason but social factors, peers and educational institutions are also responsible for it.

The lack of such information represents a gap in our knowledge of the identification of the Double-edged Sword of Technology by Exploring the Intertwined Worlds of Technology and Plagiarism. As a part of our continuing program of studies of cortically analyzing whether there exists a direct relationship between technology and plagiarism or the indirect one i.e., is technological advancement the only factor in the prevalence of plagiarism or other factors are also there which might be the social factors, the study reported here has been designed to analyze the topic from relational point of view.

Theoretical Framework

This mixed model research examines technology and plagiarism using Veblen's (1992) technological determinism approach. Proponents of this theory say that the technological advances

greatly affect plagiarism. Human progress is shaped by technology. The technological determinism approach holds that technology is the only factor in plagiarism and that it controls its scope and kind. The hypotheses allege a link between plagiarism and digital media. The effects of plagiarism in the digital age and how technological advances have impacted plagiarism reactions are also examined. Technological determinism perspective can illuminate the relationship between technology and plagiarism and its development. Survey data on technology and plagiarism will be analyzed for this study. The information emphasizes the relationship's complexity and the link between plagiarism and prevention.

Methodology

This study employed a mixed model approach to explore the complex interaction between technology and plagiarism. A questionnaire was distributed for the students of sixth semester, English department, University of Sahiwal.

Data were analyzed with SPSS 23.0. After data pre-processing, descriptive statistics were performed on university male and female students' technological determinism data. Table 1.1 shows the mean, standard deviation, and variance for the important variables in this phase. The mean in SPSS was determined using variables in a variable view tab. After setup, the dataset was analyzed. In the descriptive box, output choices were adjusted and standard deviation, variance, and analysis were done. SPSS provided an output table with the mean for specified variables and the mean and descriptive statistics were acquired. The bivariate correlation dialogue box was used to investigate variables of interest for correlational analysis. Table 1.2 shows Pearson correlation for measuring the strength and direction of the linear relationship between technology and plagiarism. By separating dependent and independent variables into separate boxes, SPSS performed regression analysis. Whether a regression analysis model parameter (coefficient) is statistically distinct from a null hypothesis or should be preserved was determined by the Wald test. For statistical significance, P value was determined. As illustrated in table 1.3, regression coefficient B measures how much the dependent variable changes with a one-unit change in the independent factors while holding other variables constant. All calculated values were then tabulated.

Population, sample, and sampling method

The study focused on the population of the English department, University of Sahiwal. Nevertheless, the research specifically concentrated on a subset derived from the English department. In order to assure the sample's representativeness, Random sampling procedure was utilized and more precisely the technique of simple random sampling, affording each member of the sixth semester from Department of English an equitable opportunity for inclusion. All the students of sixth semester were divided into groups randomly and then students from each group were taken. The study's final sample comprised 100 individuals, who were chosen from a pool of students out of whom 82 responded. The utilization of random sampling had a crucial role in mitigating bias and augmenting the applicability of the research outcomes.

Analysis of the Questionnaire

The questionnaire was developed to assess university students' awareness of the complexities of technology and plagiarism. The questionnaire had 18 closed-ended questions and 2 multiple-choice questions. The closed-ended questions focused on technology and plagiarism, whereas the open-ended questions focused on participants' awareness of the source and cause for plagiarism.

To ensure the validity and reliability of the questionnaire, its Cronbach alpha was checked to see the internal consistency of the questionnaire and it was 0.7 which seemed to be acceptable for further processing. Data analysis included 82 questionnaire replies.

Pilot study

To predict errors, the questionnaire was pilot tested. Ten participants were included in the pilot testing process. Respondents of the pilot study were excluded from the final sample. Rewording was done in a pilot test to see if respondents answered the same questions repeatedly. The needful corrections were done in the questionnaire.

Analysis and Discussion

This section aims to analyze and interpret the collected questionnaire data to answer the research questions or objectives of the study. Firstly, descriptive statistics was performed to compute the mean, standard deviation, and variance and then the correlational and regression analysis was performed and through this process research questions were analyzed. The ratio of female participants was more as compared to the male participants as shown below;
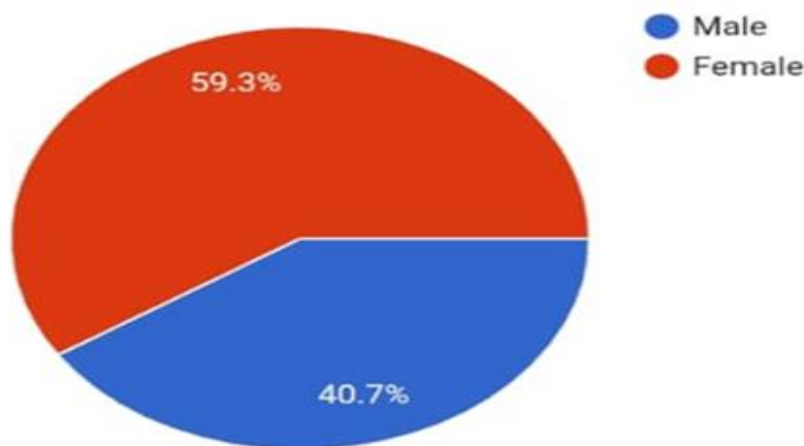
Data pre-processing

First of all, the data collected through a questionnaire survey was measured in an excel i.e., participant's responses to the close ended questions were replaced by numeric values. This step was taken because in SPSS, data is analyzed only if it is in the form of numeric values. So, encoding was done before bringing the data into SPSS. The software itself ran the missing values so data cleaning was not required. One of the necessary transformations in data was that of the categorical data (gender) into numeric values as the measurement facilitates the statistical analysis.

Table 4.1 Descriptive Statistics

Descriptive Statistics				
Variables	N	Mean	Std. Deviation	Variance

	Statistics	Statistics	Statistics	Statistics
Does technology has influenced the prevalence of plagiarism?	82	1.09	.281	.079
Do you think that the response to plagiarism has evolved in the light of tech2logical advancements?	82	1.09	.281	.079
Can technology be used to discourage plagiarism?	82	1.28	.452	.204
Is technology a cause of self-plagiarism?	82	1.28	.452	.204
Is technology the only factor responsible for both committing and preventing plagiarism?	82	1.40	.493	.243
Does technology determine the extent of plagiarism as well?	82	1.16	.367	.135
Can technology be the cause of eliminating hundred percent plagiarism?	82	1.54	.502	.252
Can technology be used to prevent plagiarism even if the content has been copied?	82	1.20	.399	.159
The technological advancement contributed most to the rise of plagiarism	82	2.11	.875	.766
Valid N (listwise)	82			

Using the above table 4.1, the total number of observations in the data was 82. Average indicating the central value of the whole data. Here standard deviation explains the variation in the data. The variable (The technological advancement contributed most to the rise of plagiarism) has more standard deviation as compare to other variables while the two variables as (Does technology has influenced the prevalence of plagiarism?) and (Do you think that the response to plagiarism has evolved in the light of tech2logical advancements?) have less standard deviation as compare to other variables. So, these two variables have more variations due to their minimum standard deviations.

The central tendency that represents the average value of a dataset indicates that the average participants agree that technology has influenced the prevalence of plagiarism but it is not the only one cause. In addition, the majority of respondents to a survey study believe that self-plagiarism is on the rise due to technological advancements and that the problem cannot be solved in the classroom regardless of its root causes.

In the above representation, participants are on the X-axis and frequency on the Y. The plot is two-fold. Participants who say that search engines and online databases are the most noted causes of plagiarism in education have a high frequency compared to those who consider search engines alone and most likely those who consider online databases as a cause. From the other perspective, more participants argue that technology cannot eliminate 100% plagiarism than that it can. The relationship between technology and plagiarism is weak because technology cannot eliminate

100% plagiarism, but search engines and online databases are the products of technological advancement, which cause plagiarism.
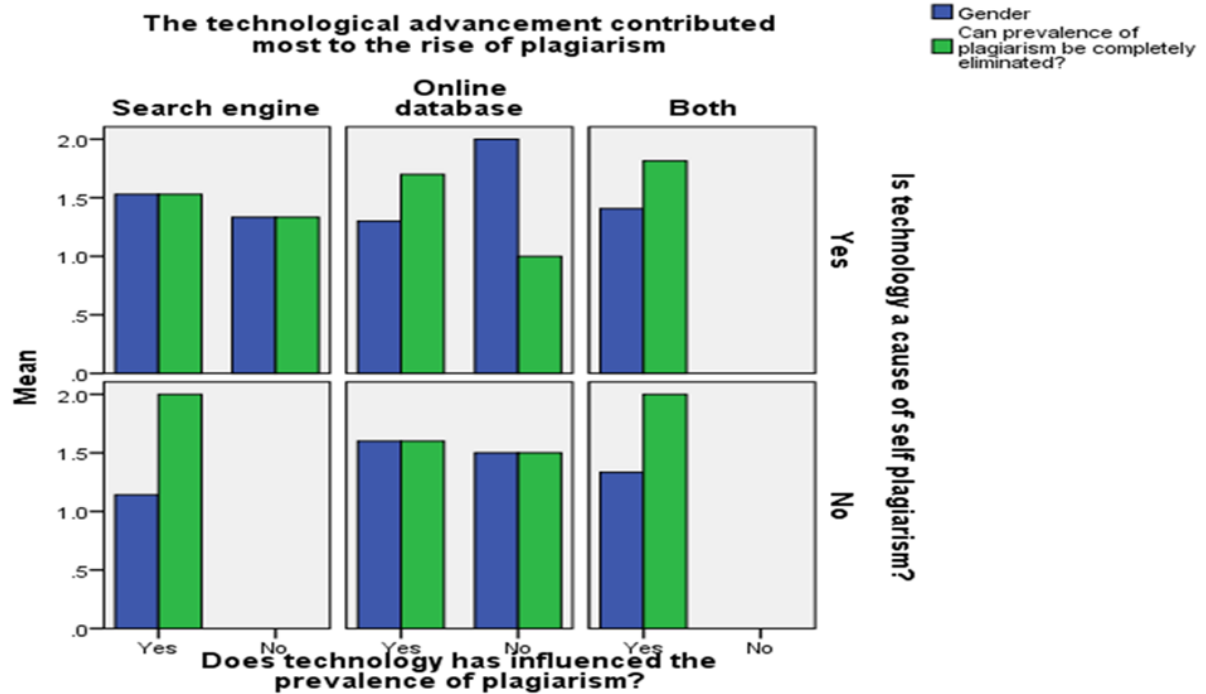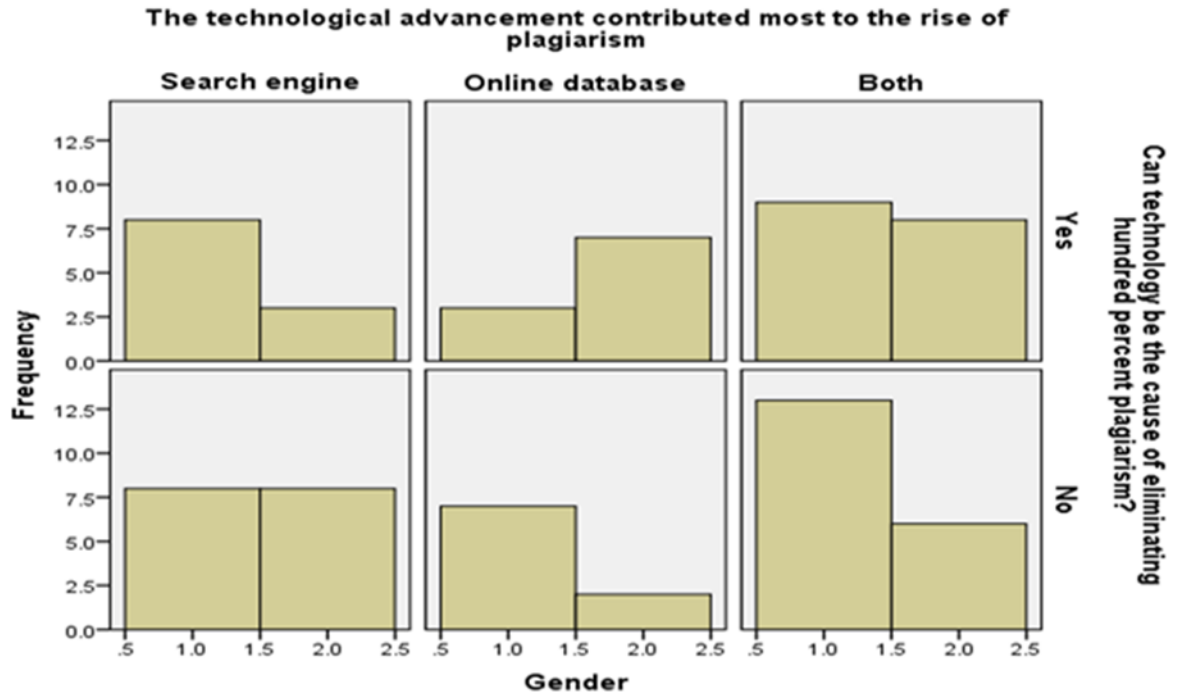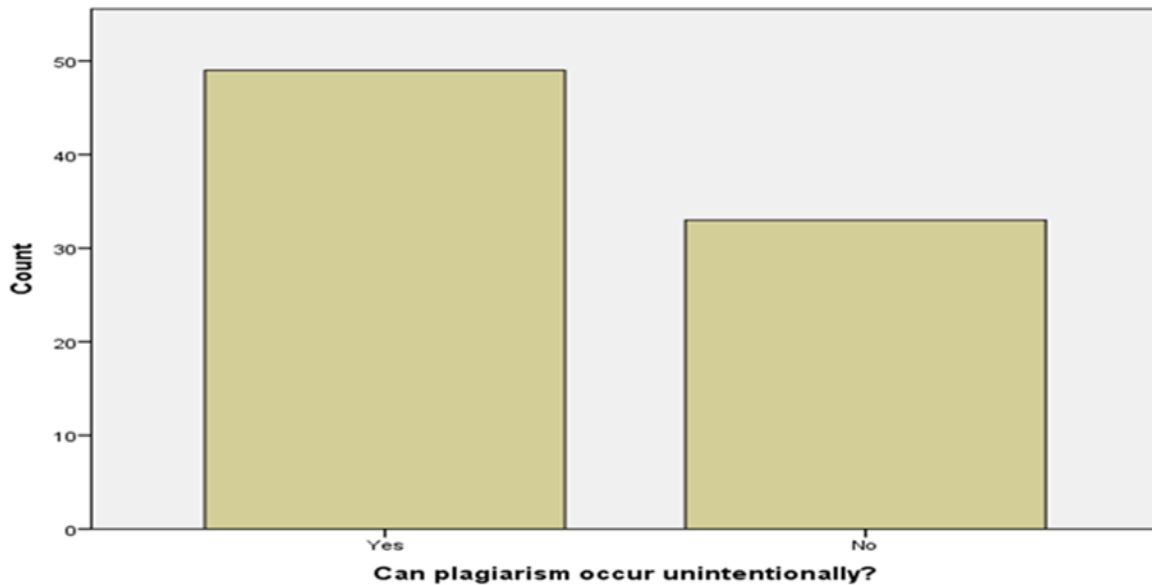
Table 4.2 Correlation Analysis

Variables	Can prevalence of plagiarism be completely eliminated?
	Pearson Correlation
Does technology have influenced the prevalence of plagiarism?	-0.295
Do you think that the response to plagiarism has evolved in the light of technological advancements?	-0.101
Can technology be used to discourage plagiarism?	-0.275
Is technology a cause of self-plagiarism?	0.209
Is technology the only factor responsible for both committing and preventing plagiarism?	-0.097
Does technology determine the extent of plagiarism as well?	-0.101
Can technology be the cause of eliminating hundred percent plagiarism?	0.073
Can technology be used to prevent plagiarism even if the content has been copied?	0.102
The technological advancement contributed most to the rise of plagiarism	0.235

The procedure of finding these values in SPSS has been described in the methodology section and using the table 4.2, it can be concluded that there is a negative or weak correlation between plagiarism and technology variables.
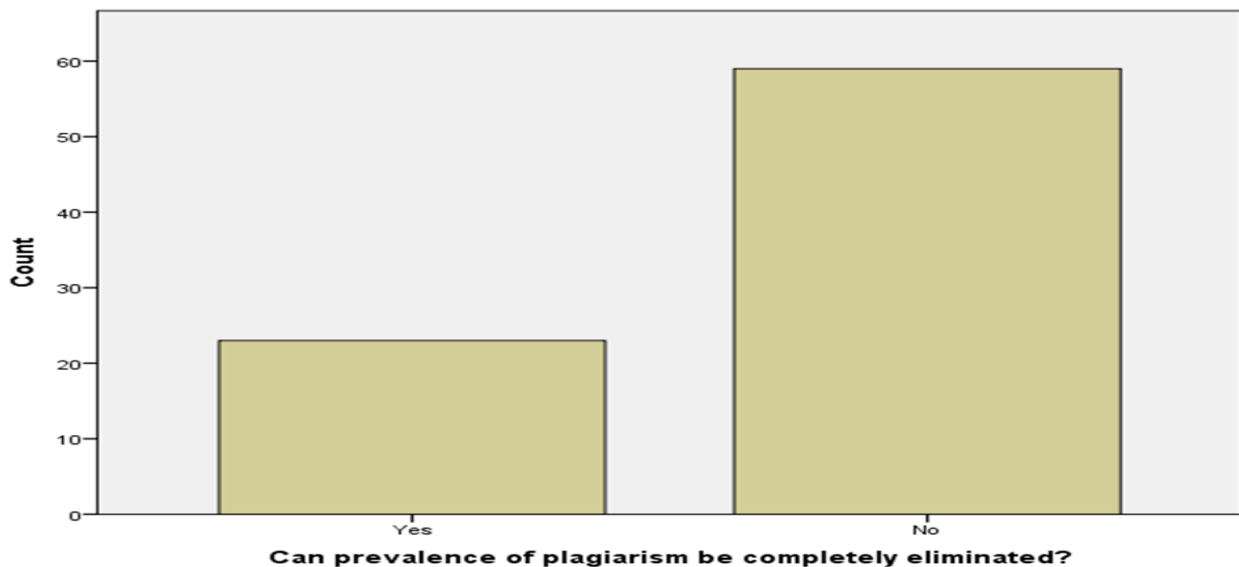
The item "Can prevalence of plagiarism be completely eliminated?" was taken as a dependent variable and its correlation was checked with all the other independent variables. This dependent variable (Plagiarism) had a very weak relationship with other variables (of technology) so the strength of the relationship of this variable with other variables was checked in SPSS. The visualization also explains the weakness of the relationship of this dependent variable with other variables as the dependent variable is the desired output.

The correlational analysis led us to infer that there exists a weak relationship between technology and plagiarism variables so above visual is one more evidence of this claim after analyzing the data. This visual entails that plagiarism in an educational setting can occur unintentionally as well without the variables of technology as a cause. The prevalence of plagiarism occurring unintentionally can include the factors other than technology so the visual above is another indication of the weak relationship as the participants agree that technology might be one of the factors but not the only one factor in the occurrence of plagiarism.

The statistical correlational analysis predicts a weak relationship between technology and plagiarism but a relationship definitely exists so that the above visual entails that even though there exists a weak relationship between the two variables so when it does exist in a weak manner even, technology by committing plagiarism has raised the moral and ethical issues because its non-ethical to steal someone else work without giving them proper credit.

The statistical correlational analysis again indicates the fact that technology cannot be a source to eliminate hundred percent occurrence of plagiarism but it can be a source to some extent so again it is proven from the data that there undoubtedly exists a weak relationship between technology and plagiarism but relationship exists to some extent.

The statistical analysis led us to infer that up to the extent at which a weak relationship exists between the dependent and independent variable, the independent variable (technology) also measures the extent to which plagiarism occurs in an educational setting i.e., various plagiarism detection tools which are the product of the advancement in technology also detects and makes explicit the percentage of the plagiarism in an academic work so it might be said from this analysis that up to the level of existence, the relationship is weak but good somewhere.

Table 4.3 Regression Analysis

Model Summary			
Step	-2 Log likelihood	R Square	Multiple R Square
1	76.258[a]	.227	.326

According to the above table, the value of R-squared is 0.227 which means there is 22.7% variation in the data. Here R means correlation and R square means coefficient of determination. Mostly R square is focused in a given table. So, the variation in dependent variable is 22.7% which is calculated after converting the value of R square into percentage. Variation actually means error.

Null hypothesis

The use of technology does not significantly affect the frequency with which plagiarism occurs, suggesting that there is no causal link between the two.

Model						
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	.942	.246	14.686	1	.000	2.565

In this model, significant or P value will tell us the significance of the model. Significant value should must be less than 0.05 which is alpha value, we assumed of ourselves. So, whatever the significant value is taken, it should be less than the alpha value. If it is so, then the model will say to be a significant one. Alpha value taken was 0.05 and p value is 0.000 which is less than the alpha value. Using the above model, we can say the overall model is statistically significant because p-value (Sig.) is less than the level of significance 0.05.

Table 4.4 Variables in Equation

Variables in the Equation				
	B	Wald	df	Sig.
Does technology have influenced the prevalence of plagiarism?	1.364	1.580	1	.209
Do you think that the response to plagiarism has evolved in the light of technological advancements?	.147	.016	1	.899
Can technology be used to discourage plagiarism?	1.158	3.171	1	.075
Is technology a cause of self-plagiarism?	-1.489	3.434	1	.064
Is technology the only factor responsible for both committing and preventing plagiarism?	.214	.123	1	.725
Does technology determine the extent of plagiarism as well?	.297	.117	1	.733
Can technology be the cause of eliminating hundred percent plagiarism?	-.138	.054	1	.817
Can technology be used to prevent plagiarism even if the content has been copied?	-1.190	1.807	1	.179
The technological advancement contributed most to the rise of plagiarism		4.249	2	.120
Constant	1.507	.800	1	.371

The analysis in table 4.4 does not allow us to reject the null hypothesis because all technological variables have p-values (Sig.) higher than the 0.05 threshold. We draw the conclusion that the use of technology does not directly affect the prevalence and occurrence of plagiarism because there is no strong relationship between the two.

The correlational investigation found no causal association between technology and plagiarism. Technology doesn't influence people's activities or society and culture alone. According to the data, technological improvements have increased plagiarism and led to new plagiarism detection technologies. Technology is a tool and a threat to academic integrity, but their relationship is not linear. The data indicate that the relationship is good because plagiarism is difficult to eliminate, even with technology, but other criteria must be considered. Technology alone cannot cause plagiarism without other causes. Technology may be the only way to prevent plagiarism. The relationship is weak and the citations cannot completely prevent plagiarism. Technology does not cause plagiarism. Search engines and internet databases complicate the link, and technological advances contributed most to plagiarism. Another major aspect in plagiarism was easy information availability. This study has begun to define the relationship between technology and plagiarism, particularly technology as a major cause, however the null hypothesis was not rejected. Naturally, other plagiarism causes may have drawn different conclusions. Stressing how research design restrictions may have limited interpretations methodologically is also important. This study's approach should be used to analyze other topics including technology's merits and cons in copying others' work.

Conclusions

Focusing on the analysis, it is possible to draw the conclusion that the complex relationship between technology and plagiarism contains a significant number of other factors in that technology is not the only factor in the occurrence of plagiarism. The study entails that there is no linear relationship between technology and plagiarism. Though the factor of technology remained one of the most important contributors in committing plagiarism but it is not the only one and has indirect relationship with plagiarism variables. So, keeping the findings in focus it is concluded that the technological determinism theory, which considered technology as a biggest contributor so far as plagiarism is concerned, after testing was rejected in a mixed model research and was not significant among the university students from whom data was collected. This might be a reason that the theory's significance was limited in a particular setting of university students and might be accepted in another setting. It might be concluded that the acceptance of the null hypothesis was because of the participant's lack of attention while giving opinions about the theory. Finally, after testing the theory it is concluded that the theory didn't carry a great significance in the setting of university students by the rejection of alternate hypothesis that the variable of technology has a direct relationship with plagiarism. In the age of technology, the identification of plagiarism has become both complex and advanced. While digital tools have significantly enhanced the ability to detect the copied content, they also face challenges and ethical dilemmas.it is nonetheless important to ensure that the use of technology support the academic integrity as well.

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