

Turnitin as a Dual-Function Tool: Detection and Education in Academic Writing Practices

Wida Wulandari^{1*}  <https://orcid.org/0000-0003-2608-6802>

Norida Canda Sakti²  <https://orcid.org/0000-0002-5805-2466>

Eka Indah Nurlaili³  <https://orcid.org/0000-0002-3932-5895>

Nico Irawan⁴  <https://orcid.org/0000-0002-5955-7634>

Maskhur Dwi Saputra⁵  <https://orcid.org/0000-0002-0680-6537>

^{1,2,3}Universitas Negeri Surabaya, Indonesia

⁴Thai Global Business Administration Technological College, Thailand

⁵Universitas Indraprasta PGRI, Indonesia

ABSTRACT

Plagiarism remains a major challenge in higher education, undermining academic integrity and scientific standards. This study explores the dual role of Turnitin as a detection tool and learning resource in promoting academic integrity and improving students' writing skills in Indonesia. Using a survey method on a proportional stratification sample of 91 students of the State University of Surabaya, this study analyzed students' perception of plagiarism and their experience using Turnitin. The results show a high awareness of plagiarism, but there is a significant gap in the understanding of correct citation practices, exacerbated by cultural and infrastructure challenges. Turnitin is seen as a valuable tool, especially when integrated within a broader pedagogical framework, but limited access and training hinder its full potential. The study highlights Turnitin's contribution to fostering academic ethics and its impact on writing quality, while also highlighting the need for a comprehensive education strategy to address fundamental challenges. Practical implications include recommendations for better integration of antiplagiarism software in curricula, training for lecturers, and policy development to build a culture of academic integrity.

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Introduction

Plagiarism is a significant global challenge in higher education, undermining the integrity and credibility of academic institutions. The increase in digital resources has facilitated access to a large amount of information, making it easier for students to commit

* Corresponding author: widawulandari@unesa.ac.id

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plagiarism. This problem is particularly prominent in academic environments where comfort often takes precedence over originality (Beketov & Lebedeva, 2022; Ndebele, 2020). Pressures in academic life, such as tight deadlines and heavy workloads, further exacerbate this trend, prompting some students to use dishonest practices rather than produce authentic work (Javaeed et al., 2019; Malik et al., 2021)

The main factor contributing to the prevalence of plagiarism is the lack of understanding of what academic dishonesty means. Many students, especially those who are just transitioning from high school to university, have difficulty understanding the nuances in correct citations and academic writing. This knowledge gap often results in unintentional violations of academic integrity (Maharajh, 2020; Ramzan et al., 2011) For international students and those whose first language is not English, this challenge is further exacerbated by difficulties in dealing with language and cultural differences in scholarly writing (Ramzan et al., 2011). These kinds of obstacles highlight the need for targeted education and support to equip students with the necessary skills to avoid plagiarism.

The consequences of plagiarism go beyond individual academic dishonesty; it threatens the core values of higher education, including originality, trustworthiness, and scientific credibility. Institutions that fail to address plagiarism risk building a culture where academic integrity is undervalued, which can damage the quality of education and the reputation of the academic community (Babelghaith et al., 2022; Mulenga, 2024). This erosion of trust has far-reaching implications, undermining the fundamental principles underlying higher education systems around the world.

Efforts to combat plagiarism have led to the implementation of various strategies, such as comprehensive plagiarism policies, educational programs, and the use of technological tools such as Turnitin (Akbar & Picard, 2019; Singh & Remenyi, 2018). However, punitive measures alone often fail to address the root of the problem, such as a lack of understanding or cultural differences in academic practice (Mahabeer & Pirtheepal, 2019) A holistic approach that incorporates education, support, and clear communication about expectations is essential to promote a culture of integrity and empower students to meet academic standards ethically (Welsh, 2017; Wijaya & Gruber, 2018)

By addressing the complex nature of plagiarism and fostering a strong academic integrity framework, higher education institutions can effectively mitigate its impact, uphold ethical scholarship principles, and preserve the credibility of academic efforts (Kavulya, 2023; Singh & Remenyi, 2018)

Turnitin has become an essential tool in higher education to address the widespread problem of plagiarism while also promoting academic integrity. The software works by comparing uploaded documents with an extensive database that includes academic publications, internet sources, and previous submissions, generating a similarity index that identifies potential plagiarism (Meo & Talha, 2019; Tambunan, 2023) This ability not only helps educators detect academic dishonesty but also maintains institutional standards by ensuring the originality of academic work (Ismail & Jabri, 2023; Issrani et al., 2021).

In addition to its role in detection, Turnitin provides detailed feedback on student writing. By reviewing originality reports, students can identify areas for improvement, such as paraphrasing and citation techniques, thus developing a deeper understanding of academic integrity (Bruton & Childers, 2015; Buckley & Cowap, 2013) Research shows that when students are guided to interpret Turnitin feedback constructively, they are more likely to refine their writing skills and reduce future instances of plagiarism (Daoud, 2024; Halgamuge, 2017) This dual function makes Turnitin invaluable for students who are not yet familiar with academic conventions, including those who are just transitioning from high school to university or learning in a language (Ayon, 2017; Graham-Matheson & Starr, 2013)

Meskipun kemampuan deteksi Turnitin sangat diperlukan, efektivitasnya dimaksimalkan ketika diintegrasikan ke dalam strategi pendidikan yang komprehensif. Studi menekankan bahwa Turnitin tidak boleh hanya dilihat sebagai alat hukuman tetapi sebagai bagian dari pendekatan yang lebih luas untuk membangun budaya tanggung jawab dan orisinalitas akademik (Ford & Hughes, 2011; Maharajh, 2020). Dengan menggabungkan kekuatan teknologi ini dengan inisiatif pendidikan yang terarah, seperti lokakarya dan sesi umpan balik yang disesuaikan, institusi dapat memberdayakan siswa untuk menghasilkan karya berkualitas tinggi dan orisinal, sekaligus mendorong praktik akademik yang etis (Cohen, 2010; Mulenga, 2024).

Turnitin's dual role as a detection and education tool emphasizes its importance in promoting academic integrity. Its integration into a pedagogical framework allows higher education institutions to effectively address plagiarism while improving students' writing skills and their understanding of ethical scholarship. In Indonesia, the use of Turnitin as a tool to promote academic integrity and improve writing skills faces various challenges, most of which are influenced by technology, culture, and education factors. Although Turnitin has great potential to improve students' understanding of plagiarism and encourage original academic work, its application in Indonesian institutions is hampered by several obstacles.

Technologically, many universities in Indonesia experience infrastructure limitations that limit the use of online tools such as Turnitin. Problems such as unstable internet connectivity, outdated computer systems, and lack of technical support are common, especially in institutions located in remote or underfunded areas (Ali & AlHinai, 2013; Zamani et al., 2016) This challenge makes it difficult for both lecturers and students to fully utilize Turnitin, thus reducing its potential as an educational tool. In addition, a lack of understanding of this software among educators often results in its less than optimal or erroneous use, as lecturers may not be trained to interpret Turnitin reports or integrate their feedback into teaching practice (Halgamuge, 2017)

Culturally, Indonesia's education system is heavily influenced by practices such as memorization and mechanical learning, which can contribute to misconceptions about plagiarism (Babelghaith et al., 2022) Students often see academic work as an authoritative imitation of a text rather than as an exercise in original thinking, which can lead to unintentional plagiarism. This cultural perspective is exacerbated by a lack of comprehensive education on academic integrity, where students may not fully understand the importance of citation practices or the nuances of plagiarism beyond simply copying directly (Babelghaith et al., 2022) As a result, students may view Turnitin as a punitive tool rather than a formative resource, only seeing its role in detecting plagiarism and not as an opportunity to improve writing skills (Thompsett & Ahluwalia, 2010)

In addition, the integration of Turnitin into the curriculum is often not a priority in higher education in Indonesia. Many institutions lack the resources to provide adequate training for lecturers and students, which further exacerbates the lack of utilization of Turnitin as an educational tool (Buckley & Cowap, 2013) Without adequate support and training, students may not fully understand how to use Turnitin effectively or understand its role in promoting academic integrity and improving writing skills. Turnitin dapat dimanfaatkan secara efektif dalam pendidikan tinggi Indonesia dengan meningkatkan infrastruktur, menyediakan pendidikan tentang integritas akademik, dan membangun lingkungan belajar yang mendukung. Hal tersebut dapat memaksimalkan potensi Turnitin untuk meningkatkan pemahaman siswa tentang plagiarisme dan berkontribusi pada budaya integritas akademik (Babelghaith et al., 2022; Buckley & Cowap, 2013; Zamani et al., 2016).

This research focuses on the issue of plagiarism in higher education and the role of Turnitin as a detection tool as well as a learning resource. This research asks several key questions: How do students perceive plagiarism? How do they view Turnitin as a plagiarism prevention and detection tool? To what extent can Turnitin improve academic

writing skills? In addition, this study also explores the challenges faced by students and institutions in integrating Turnitin into learning.

Theoretically, this study fills the literature gap related to the dual role of Turnitin in higher education, especially in non-Western contexts such as Indonesia. Students' understanding of plagiarism influenced by cultural and educational backgrounds is also a focus, offering new insights in cross-cultural studies. In practical terms, this article provides recommendations for implementing Turnitin as an effective learning tool. The insights presented include a guide to integrating Turnitin in the curriculum and the importance of training that focuses on plagiarism prevention strategies.

From a social perspective, this article emphasizes the need to build an honest and ethical academic culture through educational technology. The policy implications include suggestions for higher education institutions to devise better programs in support of academic integrity. To strengthen the article, it is recommended to have a deeper empirical analysis, such as interviews or case studies, as well as comparisons with research results in other countries to emphasize the relevance of the findings in a global context. This research is expected to be a significant contribution to the development of a more effective anti-plagiarism education strategy.

Method

Research area

State University of Surabaya (UNESA) is one of the state universities in Indonesia which began with the integration of B-I and B-II courses in Surabaya into the Faculty of Teacher Training and Education (FKIP) in 1960. Based on the Decree of the Minister of PTIP Number 182 of 1964, IKIP Surabaya was officially established on December 19, 1964.

Based on the Decree of the President of the Republic of Indonesia No. 93 of 1999, IKIP Surabaya changed to the State University of Surabaya (UNESA), which is a university with a dual mission. UNESA continues to run educational and non-educational programs, producing educators for preschool to secondary education. Currently, UNESA has nine faculties: Faculty of Education (FIP), Faculty of Languages and Arts (FBS), Faculty of Mathematics and Natural Sciences (FMIPA), Faculty of Social Sciences and Law (FISH), Faculty of Engineering, Faculty of Sports and Health Sciences (FIKK), Faculty of Economics and Business, Faculty of Vocational, and Faculty of Medicine.

UNESA's vision is to become a resilient, adaptive, and innovative educational university with an entrepreneurial base. Its mission includes the implementation of quality education and research, community service, and effective, efficient, and transparent governance. UNESA is also committed to establishing national and international cooperation to create and disseminate innovations in the field of education and non-education, in order to improve people's welfare.

Research Methodology

The data collection method used is a survey method, with a population of 302 students (students of the Class of 2022 and 2023) consisting of 203 students of the Class of 2023 and 99 students of the Class of 2022. The 2023 and 2022 batches were chosen to participate in this study because they represent the batch that has received the research method course for the class of 2022 and who have not received the research method course, namely the class of 2023. The researchers used the survey method because it helped them reach a large number of participants in a relatively short time. In addition, the population was chosen because they are the most active users of the Turnitin software compared to other groups in the university environment (S1 Economics Education study program).

For research purposes, 30% of each batch was taken as a sample, this is because the population of both is less than 1000. Researchers argue that 30% of this population can provide a response that is representative of the student population as a whole.

Proportional stratification sampling techniques are applied to obtain fair representation of respondents. The strata are students of the Class of 2022 and Class of 2023 in S1 Economics Education.

The appropriate sample size was determined for each campus after counting 30% of the population it sampled (302), which resulted in 91 people. Proportional stratification sampling techniques are applied to ensure the correct representation of respondents in the Class of 2022 and 2023. Questionnaires are used as the main instrument for data collection. An online-based questionnaire using a google form with closed answer choices and multiple choice is given to students to find out their views on plagiarism and turnitin software. The researcher carried out the distribution of questionnaires and took data for 8 weeks. Respondents were assured that the information provided would be used solely for the purposes of this research and that the data would be protected. Of the 91 questionnaires distributed, they were included in the analysis, with a response rate of 95%. In the study, a response rate of 50% was sufficient for analysis.

The data obtained from the respondents was analyzed using IBM SPSS (Statistical Package for the Social Sciences) software version 27. The results are presented in the form of pie charts, tables, and bar graphs, which show the frequency and percentage.

Results

Demography

As shown in figure 1, the demographic data of the respondents revealed that there were more male respondents compared to female respondents. In addition, the age of the respondents showed that the majority of them were in the range of young adulthood (18–25 years).

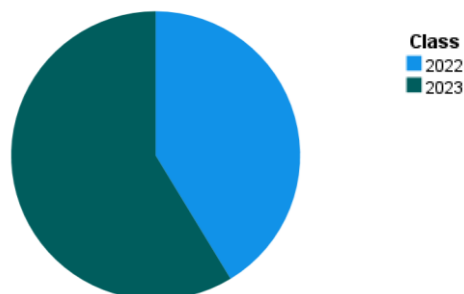


Figure 1. Student Composition

The results of the data test in figure 1 show the distribution of respondents based on their class class. Of the total 121 respondents, 50 respondents (41.3%) came from the class of 2022, while 71 respondents (58.7%) came from the class of 2023. This proportion indicates that the majority of respondents involved in this study are from the class of 2023.

The meaning of this distribution can provide an idea that students of the class of 2023 have greater involvement or relevance to the focus of research compared to the class of 2022. This may also be due to factors such as data accessibility, participation rate, or relevance of research materials to the condition of students of the class of 2023. However, this data still shows the representation of both batches so that the results of the study can reflect the perceptions and experiences of students from two different groups.

The results of the data test in figure 2 show the age distribution of the respondents in this study. Of the total 121 respondents, the majority were at the age of 19 years, with a total of 63 people (52.1%), followed by 39 respondents aged 20 years (32.2%).

Meanwhile, respondents aged 18 years were 9 people (7.4%), 8 people (6.6%) were 21 years old, and one respondent was 17 years old (0.8%) and 22 years old (0.8%).

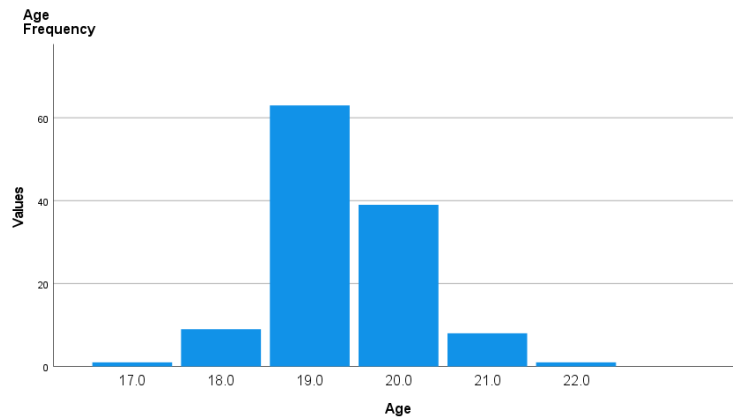


Figure 2. Age of Respondents

This distribution shows that the majority of respondents are students aged 19–20 years, which generally reflects the age group of students in the second or third year of higher education. The smaller number of respondents at 17 and 22 may reflect special cases, such as students entering earlier or later than the average age. This data provides an important demographic context for research, given that age can influence perceptions, experiences, or attitudes toward research topics, such as plagiarism or academic writing. The dominant age group can also be the main focus in the analysis of research results.

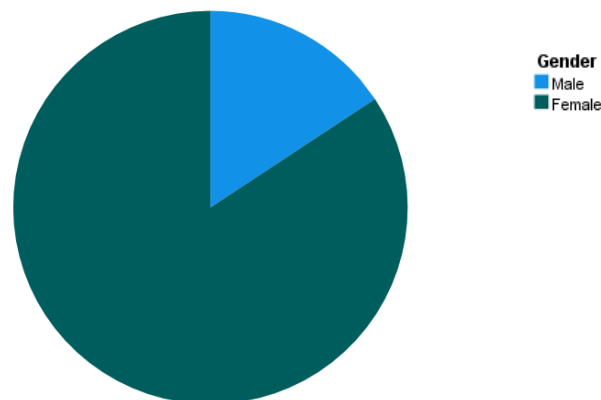


Figure 3. Gender

The results of the data test in figure 3 show the distribution of respondents by gender. Of the total 121 respondents, the majority were women as many as 102 people (84.3%), while only 19 people (15.7%) were men. This proportion shows that this study is dominated by female respondents.

This distribution has important implications for the interpretation of research results, especially if the variables studied have different relevance or relationships between the sexes. The dominance of female respondents may reflect the characteristics of a larger population (e.g., more female students in a particular course or a higher rate of female participation in the study). However, the disparity in numbers between men and women may be one of the limitations of the research because the resulting findings may reflect more of women's views or behaviors. Therefore, the results of the study need to be analyzed by considering the context of this gender distribution.

Student Awareness of Plagiarism

The results of the research data that have been carried out show that students have good knowledge about plagiarism. This is evidenced by a questionnaire question that asks about knowledge of plagiarism, 100% of respondents understand the concept of plagiarism. Both the Class of 2022 and the Class of 2023 students know the concept of plagiarism. This is presented in table 1.

Table 1. Understanding Plagiarism

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	121	100.0	100.0	100.0

(Source: Wida Wulandari, 2024)

Furthermore, in figure 4, the respondents' opinions regarding the form of plagiarism are shown. The statistical results show that the majority of respondents, namely 112 people or 92.6%, tend to copy and use other people's ideas or documents without giving proper rewards. In contrast, only 2 respondents or 1.7% paraphrased and used someone else's idea by giving appropriate attribution, while 6 respondents or 5.0% used someone else's idea with appropriate attribution. In addition, there was 1 respondent or 0.8% who chose the "other" option, which may include responses outside of the categories provided. Overall, out of 121 respondents, it was seen that the practice of rewarding original sources was still very low, with only 6.7% of respondents showing adherence to the ethical use of ideas. This indicates the need for further education to increase awareness of the importance of respecting intellectual property rights.

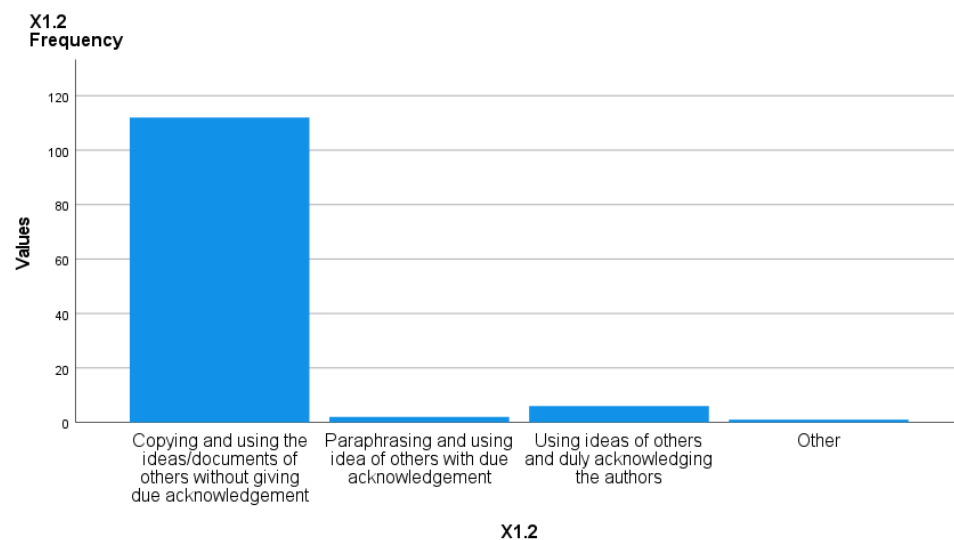


Figure 4. Forms of Plagiarism

The Ministry of Respondent further responded to parties who are vulnerable to plagiarism. The research data in figure 5 shows that students consider that plagiarism can

be experienced and carried out by anyone. From the results of the data test, it can be seen that as many as 3.3% of students do not know who is vulnerable to plagiarism. Furthermore, as many as 7.4% of plagiarism acts are considered to be committed by students and as many as 1.7% consider lecturers to be vulnerable to doing it as well.

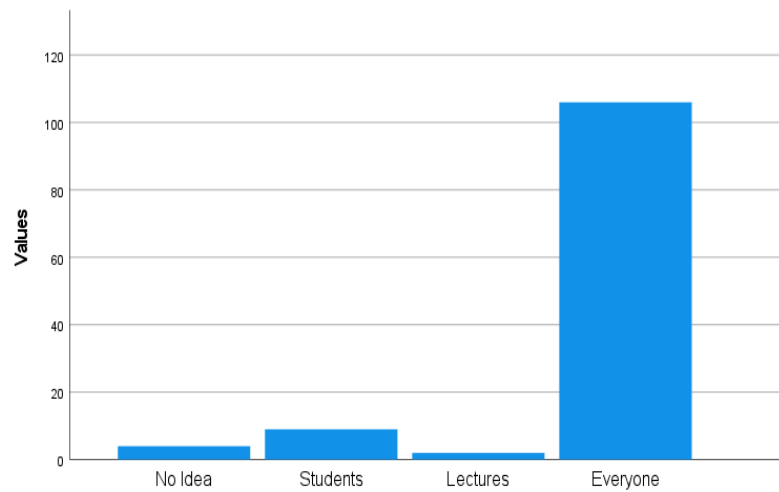


Figure 5. Parties Vulnerable to Plagiarism

The results of the data processing also show students' opinions regarding whether plagiarism can be avoided by the parties involved. Figure 6 shows that 91.7% of students realize that plagiarism faced in academic activities can be avoided. Meanwhile, 5% and 3.3% of students revealed that plagiarism was inevitable and students did not know whether the plagiarism they faced could be avoided or not.

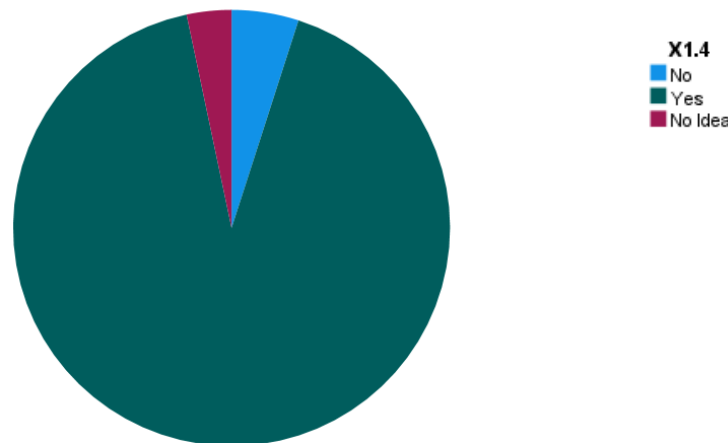


Figure 6. Avoiding Plagiarism

Figure 7 shows several reasons why students commit plagiarism based on data that has been collected and processed by researchers. The data revealed that more than half of the respondents, namely 53.7%, stated that the lack of skills in citing and referencing material was the main reason for encouraging plagiarism. In addition, as many as 32.2% of respondents revealed that laziness was the reason for plagiarism. Furthermore, the reason that encourages plagiarism is the lack of moral responsibility expressed by 10.7% of respondents. The researcher also proposed that the wrong reason for plagiarism was unknown to anyone, but no respondents agreed with this reason. The remaining 4% of respondents revealed that there are other things that encourage plagiarism.

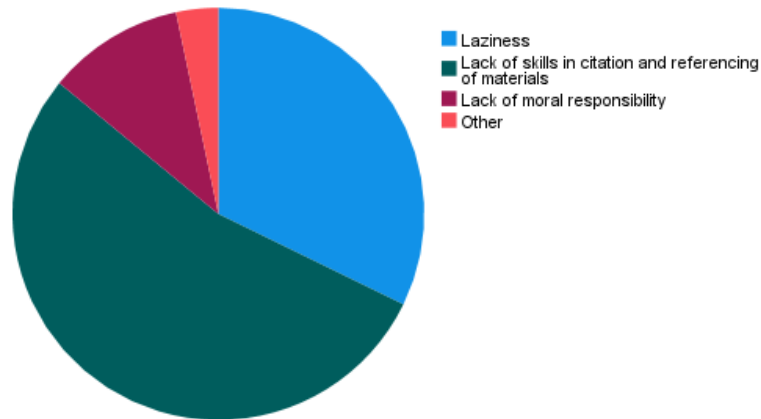


Figure 7. Reasons for Plagiarism

Universities have realized the importance of preventing plagiarism which is very likely to occur among the academic community. Prevention activities are carried out not only for permanent lecturers but also for students. This is confirmed through the results of the data test (table 2) carried out, namely that the university has provided the skills to write correctly without plagiarism, this is a response of 81% of students as respondents. The remaining 8.3% said that the university did not provide skills and as many as 10.7% of respondents did not know for sure whether the university provided it.

Table 2. Provision of Debriefing

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	10	8.3	8.3	8.3
	Yes	98	81.0	81.0	89.3
	No Idea	13	10.7	10.7	100.0
Total		121	100.0	100.0	

(Source: Wida Wulandari, 2024)

The researcher also confirmed the form of the university's efforts to provide skills to write correctly without plagiarizing to the respondent students. The data processing results shown in figure 8 show that 74.4% (90) of students get good writing skills through the courses they receive from lecturers. Meanwhile, as many students as many as students who learned to get these skills through workshops from the library, namely 14.9% of respondents. The remaining 9.9% of respondents stated that they got these skills through seminars held by faculties or study programs and the remaining less than 1% stated from other sources. This shows that good writing skills by avoiding plagiarism have become an important effort of the study program in reducing plagiarism among the academic community, especially in students. Integrating these efforts in the curriculum in the course can provide skills to students to reduce and even eliminate plagiarism in academic activities.

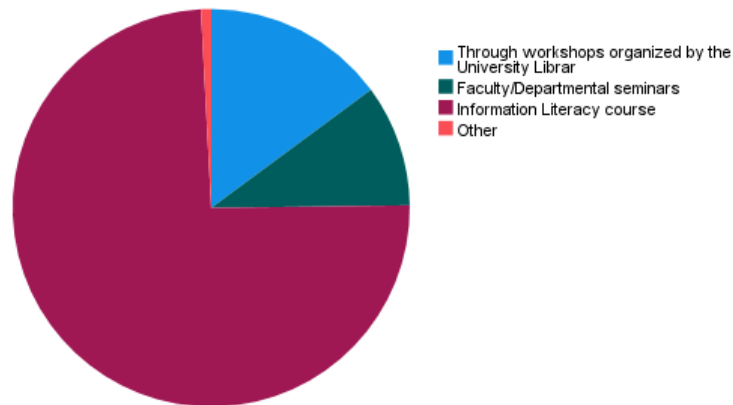


Figure 8. Higher Education Efforts

The findings of this study show that the most common form of plagiarism carried out by students is copying and using other people's ideas or documents without giving appropriate awards (92.6%). This phenomenon underscores the lack of respect for original sources by students, as only 6.7% of respondents showed adherence to the ethical use of ideas. This reinforces the views (Ramzan et al., 2011) and (Foltýnek et al., 2014), which highlight students' lack of understanding of the definition and specific forms of plagiarism as the main cause of unintentional academic misconduct.

Furthermore, the study revealed that 53.7% of college students consider a lack of skills in creating citations and references as the main cause of plagiarism. Curtis and Vardanega (2016) support these findings by stating that intensive training on academic writing conventions, such as making appropriate references and paraphrasing, can increase students' awareness and understanding of the importance of academic integrity. Thus, higher education institutions need to strengthen training programs in the curriculum to equip students with relevant skills to prevent plagiarism.

In the Indonesian context, cultural and educational challenges play a significant role in the perception of plagiarism. Memorization-based learning systems often form students' views that academic work is more of an authoritative text replication than the development of original ideas (Beketov & Lebedeva, 2022). These challenges are also impacted by limited access to tech education resources, including plagiarism detection software like Turnitin. Šprajc et al. (2017) asserts that easy access to online resources without sufficient understanding of ethical use often increases the incidence of plagiarism. Therefore, universities need to integrate discussions about the ethical use of digital resources into educational programs.

In addition, these findings show that the majority of students (91.7%) believe that plagiarism can be avoided through education and skill development. Curtis et al. study (2013) shows that online academic training is able to improve students' understanding of plagiarism, including unethical practices such as fake paraphrasing. The integration of technology-based training with relevant contextual materials can be an effective approach to building a culture of academic integrity.

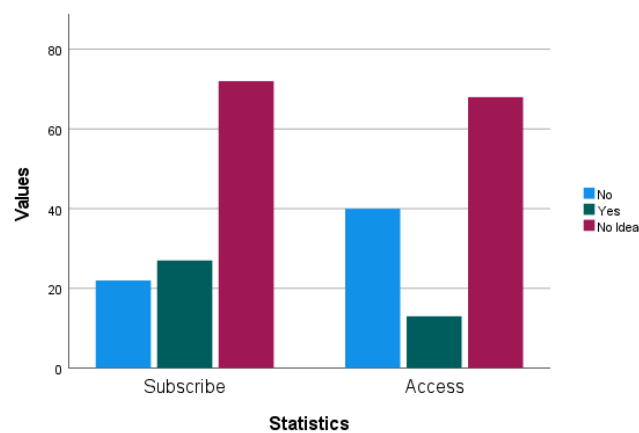
Demographic factors, such as gender, are also an important dimension that should be considered. Morán (Morán, 2022) shows that male students tend to be more permissive to plagiarism than female students. In the context of this study, there needs to be a tailored approach based on demographic groups to effectively address these perceived differences.

Student Perception of Turnitin Software

In the academic world, plagiarism cannot be separated from the act of plagiarism, related to this it is also inseparable from the detection technology. The majority of academics are familiar with widely used software, namely Turnitin, one of the software that effectively detects plagiarism. The data show that 86.8% know about the Turnitin software, while the rest say they do not know about the Turnitin software.

Turnitin software is software that is used to detect plagiarism but in its use must be subscribed by paying a certain amount of price to its developer. Furthermore, the researcher examined more deeply whether students knew whether their universities subscribed to Turnitin or not and access to use it, which is shown in figure 9.

Figure 9. Subscribe and Access to Turnitin



Based on the figure, it can be seen that the majority of students (59.5%) do not know whether universities subscribe to Turnitin. The rest, there are 22.3% of student respondents stated that they know that universities subscribe to Turnitin, and as many as 18.2% of respondents stated that universities do not subscribe.

Still discussed in the same figure 9 above, it can also be seen that access to Turnitin is also unknown to all students. There were 56.2% of respondents who stated that they did not know whether they had access to use Turnitin provided by the university to scan documents. The second most common answer regarding Turnitin access (33.1%) is that respondents cannot access the Turnitin software provided by the campus. Meanwhile, only 10.7% of respondents can access Turnitin. Furthermore, based on respondents who stated that they could access Turnitin provided by the university, they were asked to provide examples of documents that are usually scanned using Turnitin, namely 100% (13 respondents) of research papers / manuscripts, the type of documents uploaded to Turnitin.

A deeper study of the use of Turnitin provided by universities by students, namely continued with a discussion of the frequency of use of Turnitin. There were 13 respondents who could access the university's Turnitin facility, 7 of them stated that they rarely use it. While the rest, namely 3 respondents stated that they had never accessed campus Turnitin and 2 respondents stated that they often use it, and only 1 respondent stated that they used Turnitin very often.

The study also examined more deeply the respondents' support for the reduction of plagiarism and the use of plagiarism software, namely Turnitin, in academic activities. Universities have policies in terms of plagiarism, so this was also asked to the respondents. The results of the data test showed that 61.2% of respondents stated that they knew about the policy and the rest stated that they did not know it. Furthermore, in figure 10, respondents showed their response to plagiarism and their support for the use of Turnitin.

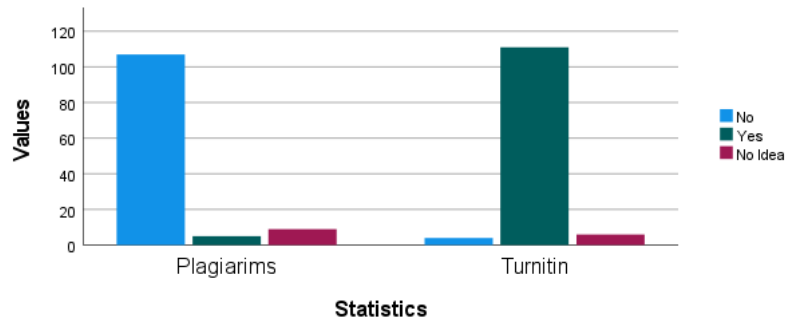


Figure 10. Response to Plagiarism and Turnitin

The study of the challenges faced by users of plagiarism prevention software can be shown in Figure 11. The data results show the various challenges faced by users of plagiarism software. The biggest challenge reported was "difficulty in reducing the percentage of authenticity," which was experienced by 69 respondents. This reflects that the majority of users still find it difficult to understand or implement strategies to lower the percentage of similarities in their documents. In addition, as many as 59 respondents stated that they face obstacles related to "access to software," indicating the need to increase the availability and accessibility of plagiarism software. A total of 19 respondents reported that they experienced "inability to understand the authenticity and color reports," indicating that there was a need for more education on how to read and interpret the reports generated by the software. Nonetheless, 11 respondents stated that they did not experience any challenges in using the software, while 2 respondents chose the "other" category, which may reflect unique or specific challenges that are not yet covered in the main category. These results emphasize the importance of providing training, clearer guidance, and increased access to plagiarism software to reduce the constraints faced by users.

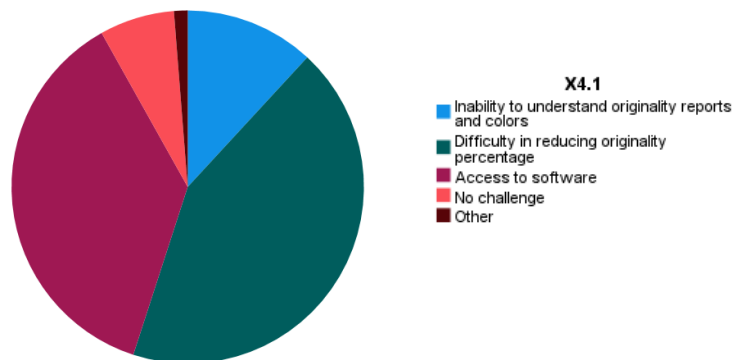


Figure 11. Turnitin User Challenges

The results of this study revealed that most students (86.8%) were aware of the existence of the Turnitin software, although only 10.7% stated that they had direct access to use it. These findings are consistent with the studies of Waigand (Waigand, 2019) and 'Ayon ('Ayon, 2017), which show that Turnitin is seen as a valuable tool for detecting plagiarism and improving academic writing skills. However, there is a significant gap in

terms of accessibility and understanding of Turnitin use, as illustrated in the research of Antwi et al (2021) and Graham-Matheson & Starr (2013).

Most respondents in this study agreed that Turnitin made a positive contribution to reducing plagiarism and increasing awareness of academic ethics. This data is reinforced by the findings of Shapoval et al.(2021), which highlight the role of Turnitin feedback in helping college students understand areas where they may have inadvertently committed plagiarism. However, the study also found that only 61.2% of students were aware of the institution's policies regarding plagiarism, indicating the need for better socialization regarding academic regulations.

One of the main challenges identified in this study was the difficulty in lowering the percentage of document similarity (69 respondents) and limited access to the software (59 respondents). This reflects the findings of Halgamuge (2017), which states that without adequate training, students often feel burdened by the complexity of Turnitin. Research by Thompsett & Ahluwalia (2010) also shows that without sufficient guidance, students may find it difficult to utilize the Turnitin feature optimally. Therefore, more structured and technology-based training is needed to maximize the effectiveness of Turnitin.

The study also found that the use and perception of Turnitin can differ based on the specific academic environment. For example, Oktapiani (2023) noted that students' experiences with Turnitin are often influenced by their academic context, including the study program and institutional culture. In addition, Tambunan (2023) and Nketsiah et al.(2023) emphasized the importance of adapting the implementation of Turnitin to suit the specific needs of student groups in various disciplines.

Although Turnitin has proven to be an effective plagiarism prevention tool, this research and previous literature (Elander et al., 2010; Shapoval et al., 2021) indicate that this software is not enough to address the root causes of plagiarism, such as a lack of understanding of academic writing conventions and poor time management. Therefore, Turnitin should be used within a broader framework, including educational initiatives focused on developing a culture of academic integrity.

The Effect of Turnitin Use on Academic Writing

Table 3. Effects of Turnitin Use

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	1	.8	.8	.8
	Neutral	17	14.0	14.0	14.9
	Agree	60	49.6	49.6	64.5
	Strongly agree	43	35.5	35.5	100.0
	Total	121	100.0	100.0	

(Source: Wida Wulandari, 2024)

Based on table 3 above, the results of the analysis show that the majority of respondents responded positively to the statement that the use of plagiarism software followed by universities has a positive influence on academic writing. As many as 49.6% of respondents agreed with the statement, while another 35.5% strongly agreed. Thus, the total number of respondents who gave positive responses reached 85.1%. On the other hand, 14% of respondents were neutral on this statement, while only 0.8% of respondents disagreed. This data shows that most respondents recognize the benefits of plagiarism software in supporting the quality of academic writing.

Table 4. Turnitin Subscription and Caution

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	2	1.7	1.7	1.7
	Neutral	8	6.6	6.6	8.3
	Agree	56	46.3	46.3	54.5
	Strongly agree	55	45.5	45.5	100.0
	Total	121	100.0	100.0	

(Source: Wida Wulandari, 2024)

Based on table 4 above, the results of the analysis show that the majority of respondents responded positively to the statement that subscribing to plagiarism software has made students more cautious in copying other people's ideas. A total of 46.3% of respondents agreed with the statement, while another 45.5% strongly agreed. Thus, the total number of respondents who gave positive responses reached 91.8%, showing that most students are aware of the importance of caution in avoiding plagiarism. On the other hand, only 6.6% of respondents were neutral, and 1.7% of respondents disagreed with this statement. This data indicates that the existence of plagiarism software has a significant impact on increasing student awareness of academic ethics, especially in respecting the originality of ideas.

Table 5. Turnitin Against Plagiarism

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	1	.8	.8	.8
	Neutral	8	6.6	6.6	7.4
	Agree	69	57.0	57.0	64.5
	Strongly agree	43	35.5	35.5	100.0
	Total	121	100.0	100.0	

(Source: Wida Wulandari, 2024)

Based on table 5 above, the results of the analysis show that most of the respondents responded positively to the statement that subscribing to plagiarism software has helped students become more enlightened about plagiarism. As many as 57% of respondents agreed with this statement, while another 35.5% stated that they strongly agreed. Overall, 92.5% of respondents gave a positive response, which reflects that plagiarism software has a significant role in improving students' understanding of plagiarism. On the other hand, there were 6.6% of respondents who were neutral and only 0.8% disagreed with this statement. This data shows that plagiarism software not only functions as a detection tool, but also as an educational medium that provides insight to students about the importance of academic integrity and ethics in writing.

Based on the results of data analysis from the three tables, it can be concluded that plagiarism software has a very positive influence on improving the quality of academic writing, prudence in copying other people's ideas, and students' understanding of plagiarism. The majority of respondents responded positively to the use and subscription

of this software, with more than 85% of respondents stating that they agreed or strongly agreed with various aspects of its benefits.

Plagiarism software not only helps detect acts of plagiarism, but also serves as an educational tool that encourages student awareness of academic ethics. Additionally, the software has proven to be effective in forming better academic habits, such as increased caution in writing work and respect for originality of ideas. Overall, this data confirms the importance of plagiarism software as an integral part of the university's efforts to support academic integrity and writing quality.

ANOVA (Analysis of Variance) is a statistical method used in research to compare the averages of two or more groups to determine if there is a significant difference between the data.

Table 6. ANOVA (Analysis of Variance)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	38.907	1	38.907	.117	.733 ^b
	Residual	39553.341	119	332.381		
	Total	39592.248	120			

a. Dependent Variable: Turnitin Score

b. Predictors: (Constant), Perception of Turnitin

(Source: Wida Wulandari, 2024)

The results of the ANOVA analysis showed that the regression model used, with the independent variable "Perception of Turnitin" and the dependent variable "Turnitin Score," was not statistically significant. This can be seen from the F value of 0.117 and the significance of 0.733, which is much greater than the significance level of 0.05. The variation explained by the regression model was only 38,907, while the variation not explained by the model (residual) reached 39,553,341, with a total variation of 39,592,248. Thus, the perception of Turnitin cannot be used as a good predictor for the Turnitin score in this sample. Further analysis may be necessary to explore other more relevant variables or to reevaluate the assumptions and quality of the data used.

Table 7. Regression Coefficient Results

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	17.224	12.620		1.365	.175
	Perception of Turnitin	.334	.975	.031	.342	.733

a. Dependent Variable: Turnitin Score

(Source: Wida Wulandari, 2024)

Based on the results of the regression coefficient test, the model shows the relationship between the perception of Turnitin and the Turnitin score. The result of the

unstandardized regression coefficients for the independent variable "Perception of Turnitin" was 0.334 with a standard error of 0.975. Standardized Coefficients have a beta value of 0.031.

The t-test value for the variable "Perception of Turnitin" was 0.342, with a significance of 0.733. Since this significance value is greater than 0.05, the results show that the perception of Turnitin does not have a significant influence on the Turnitin score. The model constant is 17.224, which means that when the perception of Turnitin is zero, the Turnitin score is predicted to be 17.224.

The results of the study show that Turnitin software has a significant influence on the quality of student academic writing. As many as 85.1% of respondents agreed that the use of Turnitin by universities has a positive impact on improving students' writing skills and understanding of plagiarism. This is consistent with the findings of Waigand (2019) and Ismail & Jabri (2023), which show that Turnitin not only functions as a plagiarism detection tool but also as an educational medium that helps students understand the correct citation practices and avoid plagiarism.

For example, the feedback Turnitin provides allows students to identify areas that need improvement, such as improper paraphrasing or the use of inappropriate sources (Cohen, 2010; Rolfe, 2011). Graham-Matheson and Starr (2013) also noted that the existence of Turnitin creates a fairer academic environment by providing tools for students to understand and avoid plagiarism. These findings are in line with your research, where 92.5% of respondents stated that Turnitin helped them better understand the importance of originality in academic writing.

The study also found a number of challenges in using Turnitin, such as limited access and lack of training. A total of 56.2% of respondents did not know if they had access to Turnitin provided by the university, while 69 respondents reported difficulties in lowering the percentage of similarity in their documents. This challenge is reinforced by the findings of Antwi et al. (2021), who state that adequate technical training and support are essential to maximize the potential of Turnitin.

Thompsett & Ahluwalia (2010) also highlighted that without sufficient training, students often find it difficult to understand Turnitin reports or use them optimally. Therefore, the results of your research support the need for a more structured approach, including training focused on the interpretation of Turnitin reports and the application of ethical academic writing practices.

The study found that perceptions of Turnitin varied depending on the student's academic experience. This is in line with Oktapiani (2023), who found that differences in the academic environment affect students' views on the advantages and disadvantages of Turnitin. In addition, Tambunan's research (2023) shows that the implementation of Turnitin must be tailored to the specific needs of each student group and discipline. In this context, universities need to consider factors such as field of study and cultural background to optimize the benefits of Turnitin.

Although Turnitin has proven to be an effective tool for detecting plagiarism, both this study and previous literature (Elander et al., 2010; Halgamuge, 2017) that its use must be complemented by educational initiatives. For example, training on academic integrity and academic writing techniques, such as citations and paraphrasing, can help students better understand academic ethics and reduce reliance on Turnitin as a mere detection tool. The implementation of Turnitin in universities must be focused on developing a culture of academic integrity. By integrating Turnitin into the curriculum along with structured training, universities can maximize the potential of Turnitin as a learning tool as well as plagiarism prevention.

Conclusion

This research shows that Turnitin software plays an important role in increasing student awareness of plagiarism and supporting the quality of academic writing. Most students understand the concept of plagiarism and are aware of its impact on academic

integrity. Turnitin not only functions as a plagiarism detection tool but also as an educational medium that helps students understand the importance of originality of work and academic ethics. These findings show that students who have access to Turnitin tend to be more cautious about copying other people's ideas and feel more enlightened about plagiarism. However, the results of the analysis show that the perception of Turnitin does not have a significant relationship with Turnitin scores, which suggests that the use of this software needs to be supported by a more comprehensive education strategy.

The implications of this research lead to the need to improve the integration of Turnitin into the curriculum through training programs and workshops that focus on academic writing skills, specifically citation and paraphrasing techniques. Universities also need to expand Turnitin's access for students to help them use the software more effectively. In addition, the anti-plagiarism policy needs to be understood by the entire academic community and equipped with clear practical guidelines. Lecturers are expected to be able to use Turnitin as a formative tool that provides feedback to students to improve the quality of their writing, not only as a plagiarism detection mechanism. Policymakers at the higher education institution level also need to allocate resources for Turnitin subscriptions and develop guidelines for its use as part of efforts to create a culture of academic integrity.

This research also opens up opportunities for further study of other factors that affect the quality of academic writing, such as motivation, digital literacy, and the influence of technology-based learning. Additionally, exploring the impact of integrating plagiarism software with other pedagogical tools in a variety of cultural and institutional contexts can be an important step toward understanding its effectiveness more broadly. By adopting this holistic approach, universities can create an academic environment that encourages integrity, ethics, and excellence in academic writing.

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