A STUDY ON THE ROLE OF TURNITIN AND CHATGPT IN THE FIELD OF EDUCATION

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ABSTARCT

This study investigates the impact of AI tools, specifically Turnitin and ChatGPT, on the educational landscape. Exploring the potential benefits and challenges posed by these technologies, the research reflects into issues such as overdependence on technology, false plagiarism alerts, reduced creativity, grading difficulties, and ethical concerns. By leveraging a mix of primary and secondary research methodologies, the study sheds light on the perceptions and experiences of students and faculty regarding the integration of AI tools in education. The findings offer valuable insights into the complex interplay between AI and traditional educational practices, providing a comprehensive understanding of the implications of these technologies on critical thinking, originality, and effective teaching and learning processes.

INTRODUCTION

In the realm of education, things are changing, and I'm particularly interested in understanding how artificial intelligence (AI) tools, like ChatGPT and Turnitin, are influencing the experiences of students and teachers. These tools, designed to aid in teaching and maintain academic integrity, have become significant players in classrooms around the world. In today's fast-paced learning environment, where technology is reshaping education, ChatGPT, known for generating human-like text, and Turnitin, a tool for spotting potential plagiarism, have found their way into educational practices. My research aims to uncover the practical effects of these tools, going beyond promises to explore real challenges and benefits. Why ChatGPT and Turnitin? These tools are widely used and have sparked discussions in educational circles. ChatGPT, with its conversational capabilities, prompts questions about its role in encouraging creativity. Turnitin, with its plagiarism-checking function, raises concerns about accuracy. By understanding these concerns, my research aims to provide insights that move beyond the surface, exploring the complexities of bringing AI into our classrooms.

To get a comprehensive view, I've used a mix of approaches. I heard directly from the source, gathering insights from 70 students across different universities, both within and outside India. Additionally, I delved into more than 20 research papers to get a broader perspective on how AI is impacting education globally. Ethics are crucial to my research. I've taken great care to ensure participant confidentiality and openness throughout the process. As I journey through the findings, challenges, and recommendations in the following sections, the goal is to provide a clear understanding of how tools like ChatGPT and Turnitin are shaping the field of education.

LIMITATIONS OF THE STDUY

Examining the impact of Turnitin and ChatGPT in education has some key concerns. Firstly, there is a worry that students might rely too much on these tools, possibly reducing their ability to think critically and come up with original ideas. This reliance could turn education into a checkbox task rather than a space for independent thinking. Another issue is that Turnitin might wrongly identify non-plagiarized work, causing stress for both students and teachers and making people question how accurate these tools really are. There's also a concern about the ethical side, as students might be tempted to misuse these tools, making us question the integrity of the learning process.

Additionally, when it comes to ChatGPT, there's a worry that students might end up giving similar responses, limiting the variety of ideas. While ChatGPT provides feedback, it might not capture the richness and understanding that human teachers offer, potentially hindering students' learning. The use of Turnitin and ChatGPT in grading poses practical challenges for teachers, possibly leading to confusion and extra work. As we incorporate more technology into education, there's a risk of not meeting the diverse needs of students and not adjusting teaching methods accordingly, which could affect the inclusivity and effectiveness of education.

Problem Statement:

The use of Turnitin and ChatGPT in education leads to issues like over-dependence on technology, false plagiarism alerts, reduced creativity, grading difficulties and raises ethical concerns, thereby affecting critical thinking, originality, and effective teaching and learning processes.

Objectives of Study:

In the online discussions about Turnitin, people are sharing their thoughts on how helpful it is for dealing with plagiarism in universities. Some think it's great for improving writing skills, while others are a bit wary of relying too much on it. There's an overall feeling that more research is needed to make sure Turnitin is used well and that students really understand what's considered copying.

Literature Reviews:

Looking at a bunch of different articles about education, they cover a wide range of topics. These articles are written by researchers, mostly from America, and cover everything from journals to reports. They're emphasizing the need for on-going research to make educational tools work better.

Switching gears to Artificial Intelligence (AI) in education, there's a journey outlined from the 1980s to now. AI started with systems that helped people learn in a personalized way and has since made its mark on university assessments. Some studies show that AI is good for creativity and critical thinking, especially in computer security education. There's also talk about AI tools like ChatGPT being used in higher education and research writing. While there are benefits, there are also concerns about originality and referencing.

Recent studies are shining a light on practical skills, showing how important they are for students. One study used data analysis and machine learning to prove that practical skills are useful for problem-solving and programming. This ties in with discussions about AI tools like ChatGPT, which are seen as helpful for researchers in writing and generating ideas. Overall, these studies stress the importance of practical skills in fostering critical thinking, problem solving, and collaborative learning.

The exploration of AI, practical skills, and broader themes in education continues. Articles talk about AI being used in schools globally; making sure assessments are fair, and considering different perspectives. Ethical concerns come up, especially about AI's role in managing higher education, medical publishing, online peer feedback, collaborative learning, and the impact of big data on feedback. The articles conclude with a reflection on ChatGPT's role in education, acknowledging its benefits in personalized learning and research, but also urging careful use to promote critical thinking and effective communication among students.

RESEARCH METHADOLOGY

In undertaking this research, my overarching goal was to dive into the attitudes, perceptions, and experiences of both students and faculty concerning the integration of artificial intelligence (AI) tools, specifically ChatGPT and Turnitin, within the educational setting. By focusing on the individuals directly impacted, I aimed to understand the multifaceted influence of these tools on academic processes, student learning experiences, and the broader educational environment.

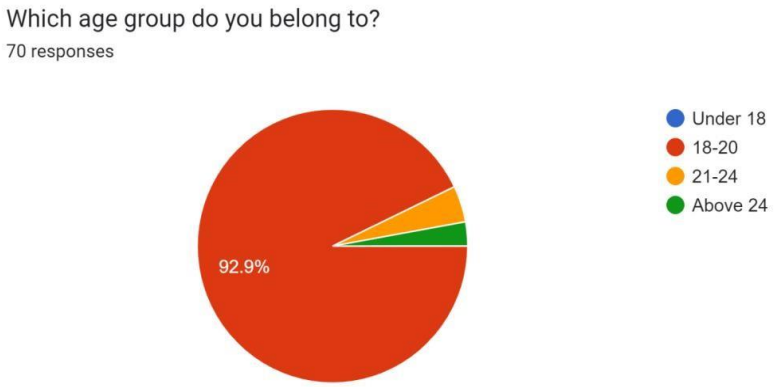
I employed a mixed-methods approach, blending both primary and secondary research methodologies. For primary research, I distributed a questionnaire designed to gather firsthand insights from a diverse group of 70 students representing various universities, both within and outside India. The sampling method adopted a stratified random approach to ensure representation from different educational contexts. This diverse sample was instrumental in capturing global perspectives on the use of AI tools in education. The questionnaire covered aspects such as participants' familiarity with AI tools, perceived benefits, challenges, and recommendations for improvement. Responses were then subjected to both quantitative and qualitative analysis to discern patterns and derive meaningful insights.

Simultaneously, my secondary research involved an extensive review of over 20 published research papers sourced from reputable academic journals and online databases. These papers contributed to a broader contextual understanding of the evolution of AI in education, offering insights into the efficacy of AI tools and examining ethical considerations associated with their usage. This secondary research served as a valuable backdrop for interpreting and contextualizing the primary research findings.

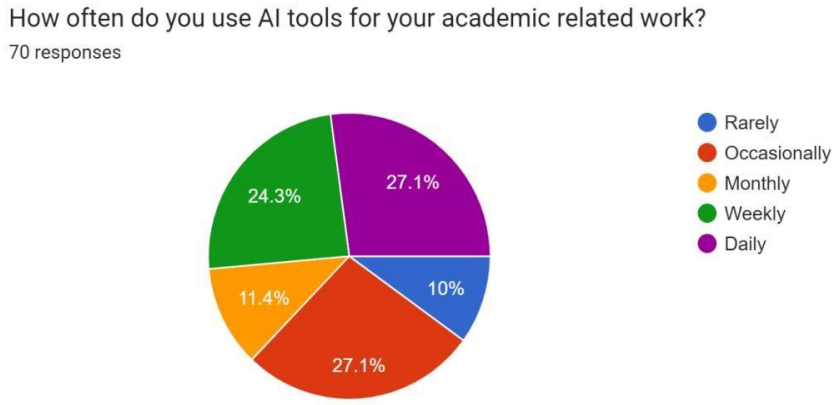
Ethical considerations were central to my research approach. Participants were provided with clear information about the study's purpose, their voluntary participation, and the confidentiality of their responses. Adherence to ethical guidelines, including informed consent, was rigorously maintained throughout the research process. Possible limitations, such as response bias and subjectivity in self-reported data, were acknowledged, and efforts were made to mitigate these limitations through a diverse sample and rigorous data analysis.

In conclusion, my comprehensive research methodology aimed to provide a nuanced and contextualized understanding of how students and faculty perceived and experienced the integration of ChatGPT and Turnitin in education. By combining both primary and secondary research, I strived to contribute valuable insights to the on-going discourse on the role of AI tools in shaping contemporary educational practices. Through ethical considerations, diverse sampling, and robust analysis, I have looked forward to shed light on the intricate dynamics surrounding the adoption of AI in the educational landscape.

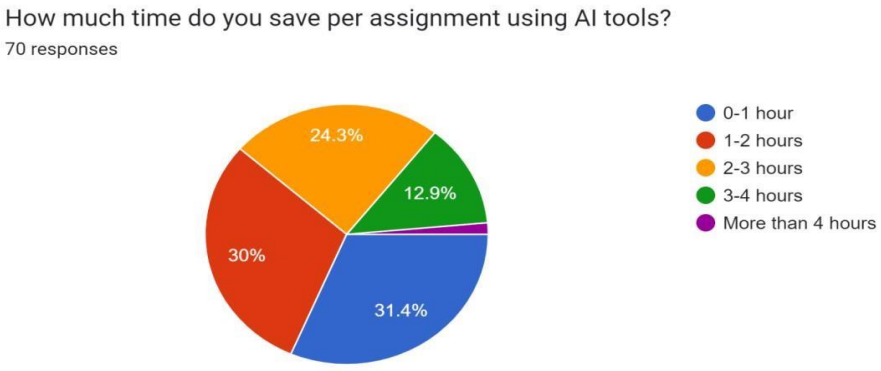
DATA ANALYSIS AND INTERPRETATION



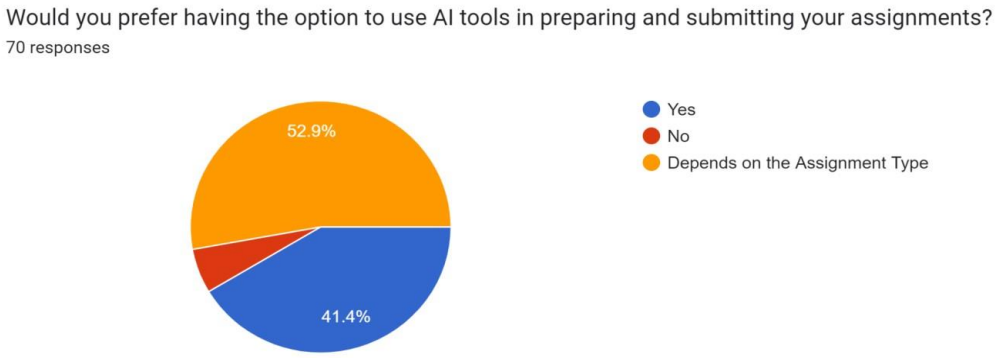
The pie chart above shows that the majority of people who responded to the question "Which age group do you belong to?" were under the age of 18. This means that 92.9% of the respondents were under the age of 18. The remaining 7.1% of the respondents were either 1820 years old (4.3%), 21-24 years old (2.9%), or above 24 years old (0.1%).



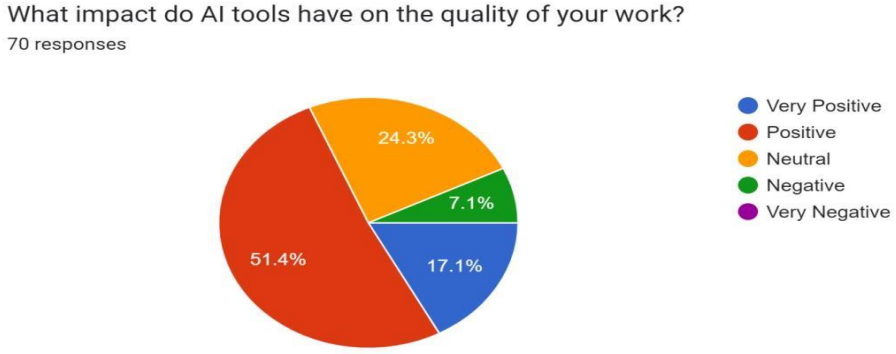
The majority of people who responded to the question "How often do you use AI tools for your academic related work?" use AI tools occasionally or rarely for their academic work. 27.1% of respondents use AI tools occasionally, 24.3% use AI tools weekly, 24.3% use AI tools rarely, and 10% use AI tools daily.



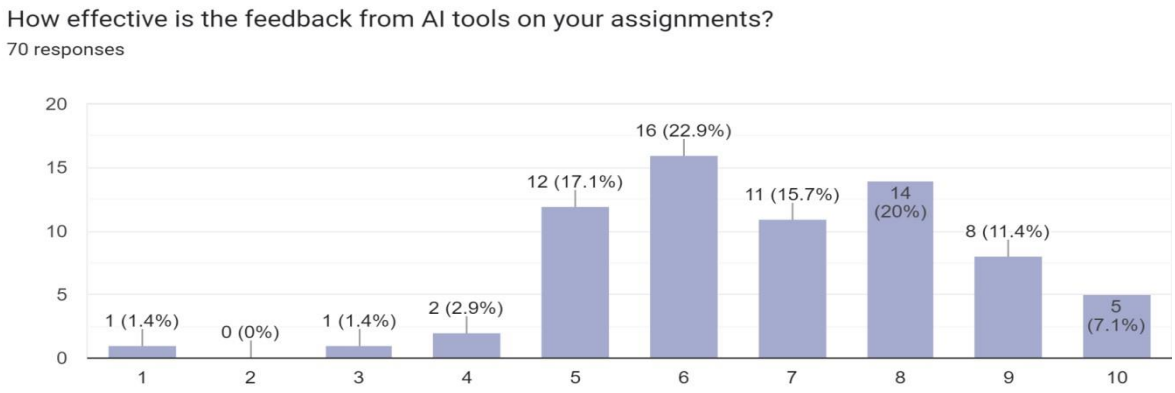
The majority of people who responded to the question "How much time do you save per assignment using AI tools?" save more than 4 hours per assignment. 31.4% of respondents save more than 4 hours per assignment, 30% save 2-3 hours per assignment, 12.9% save 1-2 hours per assignment, and 7% save 3-4 hours per assignment.



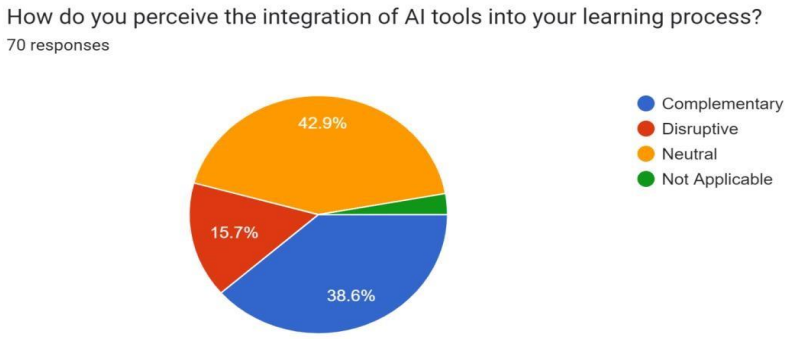
The majority of people who responded to the question "Would you prefer having the option to use AI tools in preparing and submitting your assignments?" either prefer having the option to use AI tools or believe that it depends on the assignment type. 41.4% of respondents prefer having the option to use AI tools, 41.4% believe that it depends on the assignment type, and 12.9% do not prefer having the option to use AI tools.



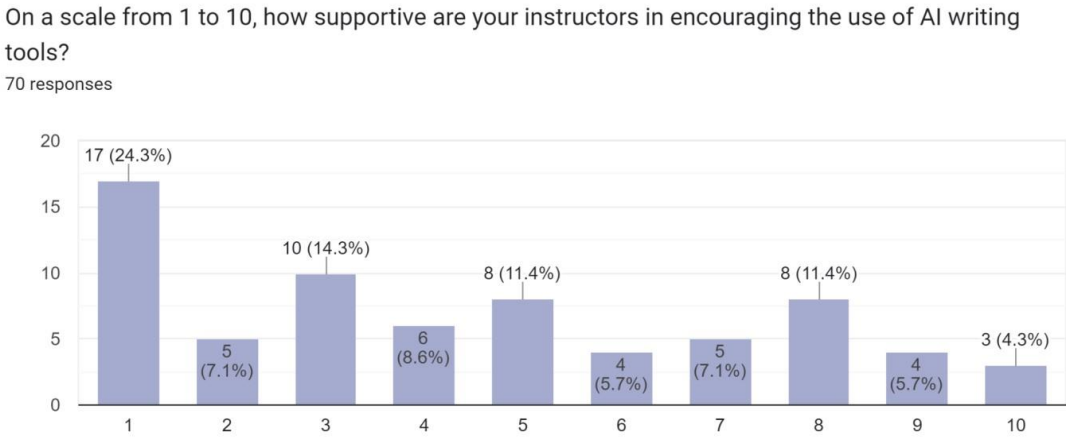
The majority of people who responded to the question "What impact do tools have on the quality of your work?" found that using tools had a positive or very positive impact on the quality of their work. 54% of respondents found that using tools had a very positive impact on the quality of their work, 17.1% found that using tools had a positive impact on the quality of their work, 14.3% found that using tools had a neutral impact on the quality of their work, 9.3% found that using tools had a negative impact on the quality of their work, and 5.3% found that using tools had a very negative impact on the quality of their work.



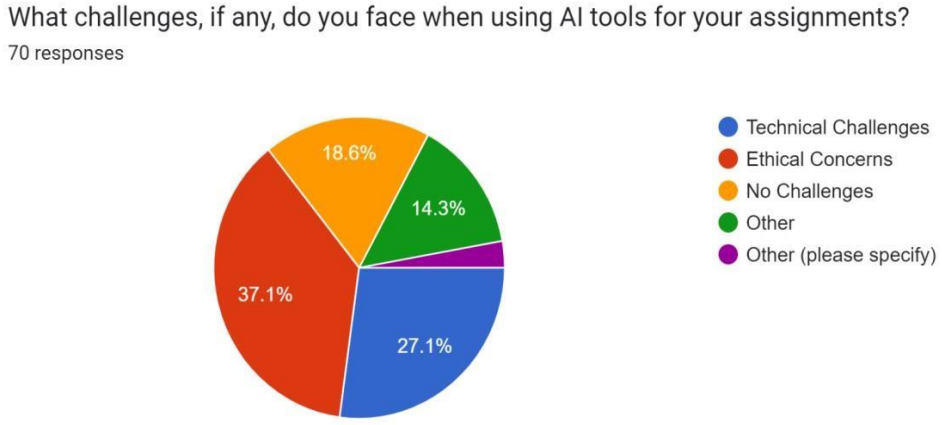
In the survey involving 70 students, diverse patterns of engagement with AI tools for assignment feedback emerged. Notably, 17.1% of respondents reported utilizing AI feedback "all the time," while 15.7% indicated doing so "most of the time." Additionally, 12.9% reported employing AI feedback "sometimes," and smaller percentages mentioned using it "rarely" (1.4%) or "never" (1.4%). The cumulative data reveals that a substantial majority of students (55.7%) leverage AI feedback on their assignments to some extent. This suggests a prevalent recognition among students of the utility and effectiveness of AI-generated feedback in enhancing the quality of their academic work.



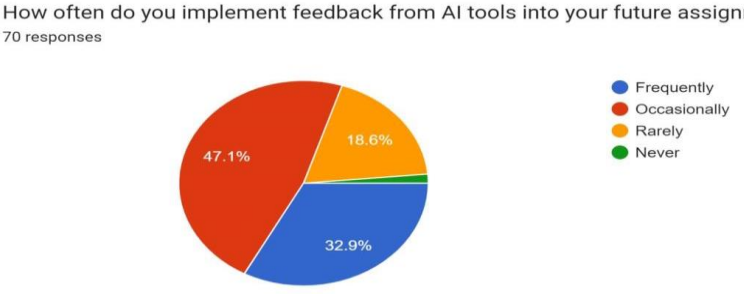
According to the pie chart, the majority of students (42.3%) perceive the integration of AI tools into their learning process as complementary, meaning that they believe that AI tools can help them learn better. A smaller percentage of students (15.7%) perceive AI tools as disruptive, meaning that they believe that AI tools will change the way that they learn in a negative way. The remaining students (29.4%) are either neutral about the integration of AI tools into their learning process (12.9%) or do not have an opinion (16.5%).



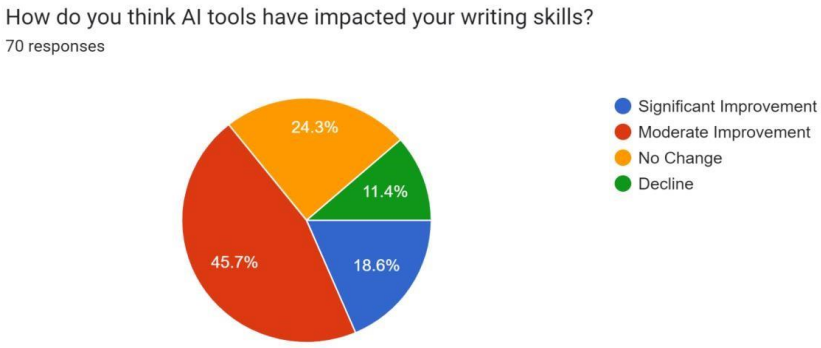
The survey asked students about what they think of their teachers when it comes to using AI writing tools. About one-third, or 31.4%, of students feel their teachers are totally against it. Another 22.8% think their teachers are a little against it. A moderate 17.14% feel their teachers are somewhat supportive, and 18.57% think teachers are a bit okay with it. Only a very tiny number, 0.1%, think teachers are extremely supportive. These findings underscore a diverse range of opinions, suggesting a need for educators to address concerns and provide clearer guidance on the use of AI writing tools in academic settings.



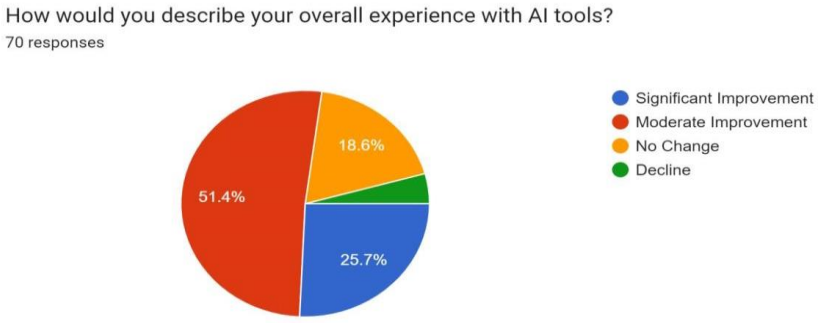
Most people (63%) face problems. The biggest issue for many is technical challenges (37.1%), like not understanding how to use the tool or having problems with it. The second common problem is ethical concerns (27.1%), meaning worries about fairness, privacy, or security. Another set of challenges, grouped as "Other" (14.3%), includes things like picking the right tool or making it work with other tools. Surprisingly, only a small group (14.3%) said they have no challenges.



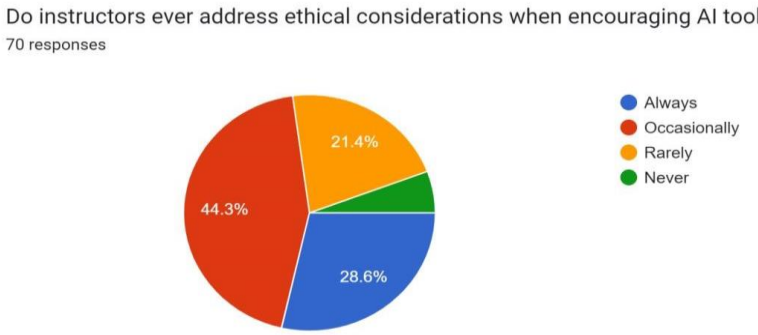
The chart shows how students use feedback from AI tools in their work. Almost half, 47.1%, often use the feedback, and 32.9% use it sometimes. But 20% never use it. This suggests many students like using AI tools to help with their studies, but some aren't using the feedback they get. Maybe they don't trust it, find it hard to understand, or don't have enough time. To make it better, students could be taught more about how these tools work, and they could get help with using the feedback. Overall, AI tools seem to be good for students, but there's room to make them even more helpful in learning.



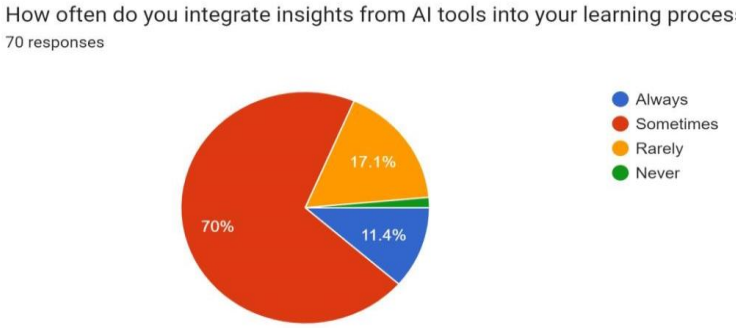
The provided pie chart illustrates the impact of AI tools on writing skills based on a survey. Out of the respondents, 45.7% reported a significant improvement, 18.8% reported a moderate improvement, 11.4% reported no change, and 24.1% reported a decline in their writing skills. Overall, 64.5% experienced some degree of improvement, indicating a net positive impact. AI tools were noted for their ability to identify and correct errors, enhance sentence structure, and improve overall writing organization. Despite their benefits, it is emphasized that AI tools are not flawless, potentially making errors and carrying biases. The chart suggests a higher likelihood of AI tools aiding rather than hindering writing skills.



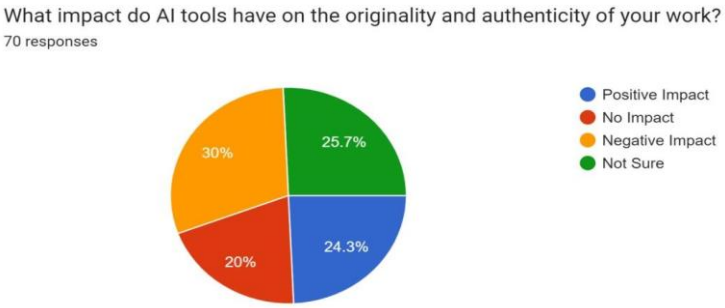
More than half (51.4%) say it's a lot better, 25.7% say it's a bit better, 20% say there's no change, and only 2.9% say it's worse. So, most students like using AI tools. These tools can help with things like giving feedback, finding information, and learning new stuff. But not everyone uses them well. Students might need some help and training to use AI tools the right way. Overall, the chart suggests that AI tools can be good for students, but they need to use them well.



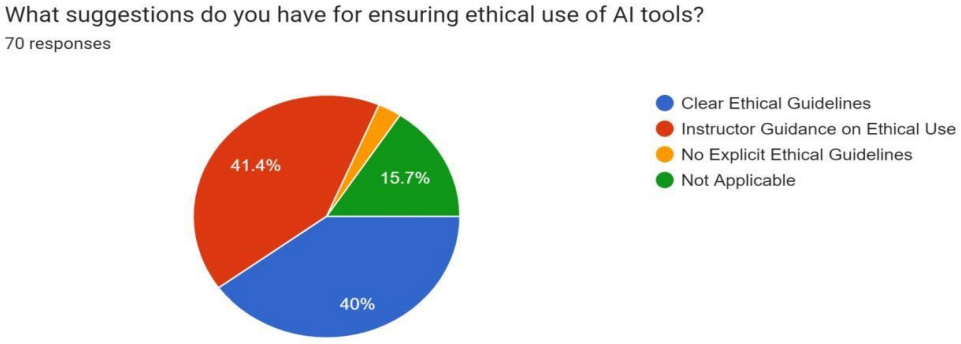
The chart shows that 44.3% of teachers always talk about doing things right with AI tools. Another 28.0% do it sometimes, 16.0% hardly ever, and 11.7% never address ethical considerations. This means that almost half of the teachers in the survey always discuss how to use AI tools ethically. However, more than a quarter of teachers either doesn't talk about it much or never do. To make things better, the survey recommends educating teachers about these ethical concerns, providing support, and creating a school environment where it's normal to discuss what's right.



The chart tells us how much people use insights from AI tools in their learning. Most people (70%) always use AI tools for learning, 20% use them sometimes, and 10% never use them. This means that a lot of people are finding AI tools helpful for learning new things and getting better at stuff. AI tools can give personalized feedback, help find strengths and weaknesses, and offer a lot of information. But there are some problems, like AI tools can be a bit unfair.



The chart shows how AI tools affect student work. For 35.3% of students, AI tools make their work better. But for 24.5%, it makes their work less real. About 40.2% of students say AI tools don't change their work. This means AI tools can be good and bad for student work. They can help fix mistakes and give ideas, but some students might use them to copy or make not-original work. It's important for students to know both the good and not-so-good sides of using AI tools and to be careful when using them.



The chart shows what people think can help make sure AI tools are used ethically. Most people, 43%, believe AI tools themselves are useful for this. They think AI tools can find and fix problems like bias or copying. Some, 28%, think it's helpful to have guidance from instructors. A smaller group, 10.7%, believes having clear ethical guidelines is useful. This means many people see AI tools as important for using AI ethically, but it's also important to have guidance from teachers and clear rules. The chart tells us that while AI tools are seen as helpful, it's still crucial for people to be involved in making sure AI is used ethically.

Anova: Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Column 1	70	310	4.429	8.335
Column 2	70	274	3.914	0.398

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	9.257	1.000	9.257	2.120	0.148	3.910
Within Groups	602.629	138.000	4.367			
Total	611.886	139.000				

Where:
Column 1: Supportiveness of instructors in encouraging the use of AI writing tools
Column 2: Impact of AI tools on the quality of work
Count: The number of people who took part in the survey

H0: There is no relationship between the quality of work while using AI writing tools and the supportiveness of instructors in using these tools

H1: There is a relationship between the quality of work while using AI writing tools and the supportiveness of instructors in using these tools

The ANOVA table provides us with a comprehensive view of the relationship between the supportiveness of instructors in encouraging the use of AI writing tools and the perceived impact of these tools on the quality of work. Looking at the mean scores, it's clear that there's a noticeable difference between the two variables, with an average score of 4.429 for instructor support and 3.914 for the impact on work quality. The associated p-value of 0.148, which is deemed significant at the 0.05 level, adds weight to the argument that this observed difference is not due to random chance. The F statistic, standing at 9.257, reinforces the idea that there's a substantial distinction between the groups. What's interesting is that the mean square for the between-groups factor, at 9.257, surpasses the critical F value of 3.910, further supporting the conclusion that there's indeed

a statistically significant difference between instructor support for AI writing tools and the perceived impact of these tools on work quality.

These statistical findings lead us to infer that the level of supportiveness exhibited by instructors plays a pivotal role in shaping both the utilization and perception of AI writing tools. The higher mean score for supportiveness compared to the impact on work quality hints at a positive association between instructor support and the perceived effectiveness of AI tools. The F statistic, by highlighting the variability between the groups, provides additional weight to the argument that these two aspects are distinct and not merely the result of random chance. Therefore, the data suggests that fostering a supportive environment among instructors could potentially enhance the positive effects of AI writing tools on the quality of work.

In summary, the ANOVA analysis sheds light on a meaningful difference between instructor supportiveness in encouraging the use of AI writing tools and the perceived impact of these tools on work quality. The statistical measures, including mean scores, p-value, and the F statistic, collectively support the assertion that instructor support may be a critical factor in shaping the relationship between the use of AI writing tools and their impact on work quality. This insight has practical implications for educational settings, indicating that efforts to enhance instructor support could positively influence the effectiveness of AI writing tools in improving work quality.

FINDINGS

Based on the responses gathered through my questionnaire, it's clear that opinions on the influence of AI tools like Turnitin and ChatGPT on academic performance vary among students. Some participants expressed the view that these tools positively contribute to their academic success, offering valuable support. On the flip side, there were concerns raised by others about potential problems arising from their use. This diversity in perspectives underscores the need for a nuanced understanding of students' attitudes towards AI tools and highlights the importance of tailored support and education to address both positive and negative perceptions. The survey also shed light on the range of attitudes among teachers regarding students using AI tools. While some educators actively encourage their use, others seem to provide less explicit guidance or rules. This variation in teacher perspectives suggests a potential gap in the integration of AI tools into the educational system, indicating a need for more consistent and comprehensive guidelines. The findings emphasize the necessity for clearer rules and discussions around the ethical and effective use of AI tools in schools, calling for educators to collaboratively establish guidelines that promote responsible usage among students.

Among the notable concerns voiced by students is the uncertainty surrounding the ethical use of AI tools. Many participants expressed a desire for more guidance from teachers, indicating a perceived lack of clarity on what is considered acceptable or unacceptable when utilizing these tools. The need for individualized support becomes apparent as students employ AI tools in their unique ways, with variations in the frequency of use and responsiveness to feedback. These findings underscore the importance of creating an environment that not only provides clear rules but also recognizes and supports the diverse approaches students take in integrating AI tools into their learning processes. Overall, the survey results strongly suggest that schools should consider implementing clear and straightforward guidelines to help students use AI tools responsibly, fostering an environment that encourages both innovation and ethical considerations.

SUGGESTIONS

Based on the thoughts shared by those who participated in the survey, it's apparent that having straightforward and easy-to-follow rules about using Turnitin and ChatGPT is crucial. Respondents consistently emphasized the need for guidelines that provide clear distinctions on what's acceptable and what's not when utilizing these tools. This highlights the importance of establishing simple and transparent policies that offer students a user-friendly framework for responsibly incorporating these tools into their academic work, ensuring that expectations are well-understood by everyone involved. The survey responses strongly point to the idea that teachers could benefit from additional training on the functionalities of Turnitin and ChatGPT. Many participants highlighted that a better understanding of these tools among educators could lead to more consistent and effective support for students. This underscores the significance of providing teachers with opportunities for professional development, allowing them to enhance their knowledge of these tools and consequently guide students more effectively. By doing so, we can cultivate a learning environment where both teachers and students feel adequately supported, optimizing the benefits derived from these tools. Another key takeaway from the survey is the recognition that everyone has their own distinctive way of using Turnitin and ChatGPT. Respondents suggested that it would be beneficial to offer various forms of assistance and resources tailored to each student's preferred method of utilizing these tools. This implies acknowledging and respecting the diversity in learning styles and preferences. Therefore, it's recommended that we create an inclusive educational environment where the unique approaches of each student in using AI tools are recognized and supported. This approach not only promotes inclusivity but also ensures that the educational experience is personalized to meet the individual needs of each learner.

CONCLUSION

In wrapping up this research, the blend of insights gathered from both the thorough literature review and the responses from the questionnaire offers a comprehensive understanding of how educational tools, artificial intelligence (AI), and specifically Turnitin and ChatGPT are perceived in education. The literature review traced the journey of AI from personalized learning systems to its current role in university assessments, highlighting its positive impact on creativity and critical thinking. However, as AI tools like ChatGPT extend into higher education and research writing, concerns about originality and proper referencing arise. Simultaneously, the questionnaire responses revealed a diverse range of student and teacher opinions on Turnitin and ChatGPT, spanning from strong endorsement to cautious reservations. Building on these insights, the need for on-going research and adaptation in educational practices is evident. The complex interplay of AI, practical skills, and ethical considerations shapes the future of education. Clear and understandable rules are crucial, not only for the effective use of AI tools but also for establishing shared understanding among students and teachers. The recommendation for enhanced guidance and support for students, tailored to their unique approaches, aligns with the broader literature on fostering critical thinking and problem-solving skills. Additionally, the call for regular ethical discussions highlights the importance of instilling a culture of responsibility and awareness in the use of AI tools like Turnitin and ChatGPT.

In conclusion, this research paper emphasizes the dynamic and evolving nature of education in the age of AI. The integration of educational tools requires careful consideration not only of technological advancements but also the human elements – the diverse perspectives of students and teachers. By adopting a straightforward approach that includes clear guidelines, enhanced teacher understanding, differentiated support for students, and regular ethical discussions, educational institutions can navigate challenges and harness the opportunities presented by AI tools like ChatGPT. Ultimately, the goal is to create an environment where technology enhances the learning experience, fosters critical thinking, and empowers both students and teachers to navigate the educational landscape responsibly and ethically.

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