PAKISTAN

SUMMARY:

FROM DISTANCE TO DIRECTION: AI ACADEMIC SUPPORT AT ALLAMA IQBAL OPEN UNIVERSITY (AIOU), WITH STUDIOSITY.

Key findings:

- Studiosity demonstrates strong potential as a scalable and ethical academic support tool for AIOU's distance learners. It complements traditional instruction by providing accessible, personalised feedback at scale.

- Findings show that Studiosity contributed significantly to improving students' academic writing skills, understanding of plagiarism, and confidence in learning.

- Tutors reported a reduction in workload and noted improvements in the quality of student submissions.

- A key rationale for selecting Studiosity is its ethical and secure use of AI. It operates within a closed system and guarantees data privacy. Further, it guides students rather than offering direct answers, thereby minimising the risk of plagiarism.

- A significant number of users reported an increased understanding of plagiarism and how to avoid it after using Studiosity. This highlights the platform's positive role in promoting academic integrity among students.

Research Report

FROM DISTANCE TO DIRECTION

AI Academic Support through Studiosity at AIOU

ALLAMA IQBAL OPEN UNIVERSITY

APRIL, 2025

CONTENTS

Executive Summary

This pilot study evaluates the integration of *Studiosity*, an AI-powered academic support platform, at Allama Iqbal Open University (AIOU), Pakistan's largest distance learning institution, serving over 1.1 million students. As part of AIOU's digital transformation initiative, the project aimed to address critical challenges in distance education—particularly the provision of timely, personalized academic feedback—by testing the effectiveness, usability, and scalability of AI-generated feedback.

A total of **4,325 students** were registered for the pilot. Among them, **1,807 students signed up** for Studiosity, and **1,411 actively used** the platform. To assess its impact, **451 students participated in the pre-assessment survey**, while **254 students took part in the post-assessment survey**. Additionally, **24 out of 46 tutors** provided structured feedback through an online survey.

Findings show that Studiosity contributed significantly to improving students' academic writing skills, understanding of plagiarism, and confidence in learning. Tutors reported a reduction in workload and noted improvements in the quality of student submissions. Students expressed a strong interest in continued use of the platform, while also recommending enhancements, including more tailored feedback, additional learning resources, improved interface design, and mobile/offline accessibility.

Despite these promising outcomes, limitations such as low survey participation, a short evaluation period, and infrastructural challenges (e.g., limited internet access and digital literacy) were noted. These factors highlight the need for ongoing support, training, and longitudinal studies to inform broader adoption.

Studiosity demonstrates strong potential as a scalable and ethical academic support tool for AIOU's distance learners. It complements traditional instruction by providing accessible, personalized feedback at scale. Key recommendations include expanding training, improving platform usability, integrating progress tracking and plagiarism detection features, and increasing accessibility for diverse student populations.

Background of the Study

The Allama Iqbal Open University was established in 1974 to provide affordable education to the targeted marginalized and remote populations at their doorstep. It is the largest institution for distance learning in Pakistan with an enrollment exceeding 1.1 million students across undergraduate, graduate, and postgraduate programs. The university AIOU employs flexible learning models to accommodate its diverse and geographically dispersed student base. However, to cater to the needs of the increasing number of students, AIOU encounters persistent challenges, including delayed academic support, student isolation, and inconsistent feedback mechanisms.

Acknowledging these and other similar challenges, AIOU began its Digital Transformation initiative, aimed at utilizing technology to modernize academic delivery and significantly enhance student engagement. Through this initiative, the university has been consistently evaluating potential platforms capable of enhancing academic support services, especially for its distance learners, and to scale it effectively across its larger student base.

The integration of AI-driven academic support systems, which offer the potential to deliver timely, personalized assistance at scale, has become one of the promising avenues in this regard. These AI tools can provide students with immediate, tailored feedback based on their individual needs. This type of assistance is especially significant for AIOU, given its large student numbers and geographic dispersion, which make it strenuous to deliver personalised support through traditional means.

In this milieu, the university has partnered with Studiosity, an AI-driven academic support platform, which has the potential to address each of these issues, offering 24/7 services such as essay feedback, live tutoring, and personalized study resources designed specifically to enhance learning outcomes in academic settings.

This pilot project specifically aims to assess the effectiveness of AI-generated student feedback within AIOU's educational framework. The focus was to evaluate the accuracy, relevance, and impact of AI-assisted feedback on student learning, with the larger aim of determining its potential for large-scale implementation. Through this initiative, AIOU primarily seeks to enhance the quality, personalization, and timely academic support across its distance education programs.

The following sections outline the rationale behind selecting Studiosity as an intervention, the main objectives guiding this pilot study, and the broader significance of evaluating AI-generated feedback within AIOU's educational framework.

Rationale

Student feedback has a crucial role in the learning process; it not only helps the educators to identify key areas for improvement but also allows students to enhance their understanding. However, in large-scale educational settings, especially in an open distance learning such as Allama Iqbal Open University (AIOU), it becomes challenging to provide timely and personalized feedback to students, mainly due to the high student-to-teacher ratio and resource limitations. The traditional feedback mechanisms often struggle to offer individualized guidance, leading to gaps in student engagement and learning outcomes due to geographical barriers and a lack of financial and human resources.

AIOU has consistently strived to enhance its educational offerings and student support services; however, with the growing number of students, especially in the online and distance learning domains, the need to implement scalable and efficient support systems has become indispensable. Where traditional methods of academic assistance are often inadequate, Artificial Intelligence (AI) can offer a promising solution by automating and personalizing feedback based on students' responses, learning patterns, and academic performance. Given

AIOU's challenge of providing timely feedback across its dispersed student body, AI-generated feedback has the potential to provide instant, efficient, and tailored insights, enabling students to address their weak areas more effectively.

Acknowledging this critical need for scalable, efficient, quality feedback mechanisms, AIOU partnered with Studiosity. It is a platform specifically designed to provide AI-generated student feedback in real-time through its AI-enhanced tools.

This study aimed to evaluate the effectiveness of AI-generated feedback in improving students' engagement, comprehension, and academic performance. Studiosity, with its expertise in AI-driven educational tools, offers an opportunity to test the feasibility and impact of AI-generated student feedback in open and distance learning environments.

A key rationale for selecting Studiosity is its ethical and secure use of AI. It operates within a closed system and guarantees data privacy. Further, it guides students rather than offering direct answers, thereby minimizing the risk of plagiarism. Human oversight through tutors further ensures that feedback provided is contextually relevant and pedagogically sound. Beyond basic corrections, Studiosity also claims to encourage critical thinking, independent learning, and proper academic citation, aligning with the university's broader educational goals. The seamless integration of the platform into the AAGHI AIOU's Learning Management System (LMS) only enhances the overall academic ecosystem. The effectiveness of this platform in enhancing student learning and engagement in a distance learning environment warrants empirical evaluation, making it a suitable candidate for pilot testing.

The implementation of Studiosity at AIOU pursues several objectives: to improve students' academic writing, promote ethical AI use, raise academic outcomes, ensure inclusive academic support, foster self-reliance, and enable data-informed teaching interventions. These aims reinforce AIOU's mission to provide equitable, high-quality education.

Given these pressing challenges in providing timely and personalized student feedback, and the potential of AI-driven platforms like Studiosity to meet these needs, it becomes essential to systematically evaluate their effectiveness in a real-world academic setting. This pilot study at AIOU is therefore designed to explore whether Studiosity can enhance student engagement, comprehension, and academic performance in a scalable, sustainable manner. The following objectives have been developed to guide this evaluation.

Objectives

The primary objective of this study is to evaluate the effectiveness of AI-generated student feedback in enhancing learning experiences at Allama Iqbal Open University (AIOU) through collaboration with Studiosity. Given this significance, the study is designed with the following objectives to systematically evaluate the potential and impact of AI-generated feedback through Studiosity within AIOU's educational framework. This study aimed to achieve the following objectives:

a) To analyze how AI-generated feedback influences students' understanding, engagement, and academic performance.
b) To gather students' opinions on the usefulness, clarity, and effectiveness of AI-driven feedback in supporting their learning processes.
c) To explore the practicality of implementing AI-generated feedback within the AIOU's learning management system and its scalability for wider use.

By achieving these objectives, this study will contribute to the growing body of knowledge on AI in education and inform future strategies for improving student feedback mechanisms at the AIOU.

Significance

The integration of Artificial Intelligence (AI) into education has the potential to transform student learning experiences by providing timely, personalized, and data-driven feedback. This study holds significant value for multiple stakeholders, including students, educators, and institutional policymakers at the Allama Iqbal Open University (AIOU).

For students, AI-generated feedback can enhance learning by offering immediate and tailored responses that help them identify their strengths and areas for improvement. This can lead to improved academic performance, increased motivation, and a more engaging learning experience, particularly in distance education settings, where direct interaction with instructors is limited.

For educators, this study provides insights into the effectiveness of AI in streamlining the feedback process, reducing workload, and allowing them to focus on more complex aspects of teaching. AI-powered feedback can complement traditional teaching methods, ensuring that students receive consistent and high-quality support throughout their academic journeys.

For the AIOU and similar institutions, this research can inform future policies on AI adoption in education. As higher education institutions worldwide increasingly explore AI-driven learning solutions, this study will help AIOU determine the feasibility of integrating AI feedback tools into its existing systems. These findings will contribute to the broader discourse on AI in education, offering practical insights for implementing AI-based student support mechanisms in open and distance learning environments.

By collaborating with Studiosity, this study will also contribute to the development of AI tools tailored to the needs of distance learners, setting a foundation for future advancements in AI-assisted education in Pakistan and beyond.

Literature Review

The increasing adoption of Artificial Intelligence (AI) in educational settings has brought about transformative changes, particularly in how academic support is delivered to students. This shift is especially significant in Open and Distance Learning (ODL) systems, where institutions face persistent challenges in providing timely, personalized feedback due to high student-teacher ratios and logistical constraints (Tonbuloğlu, 2023). In this context, AI presents a compelling solution for its ability to automate processes, analyze learner behavior, and adapt to individual needs, and thus holds considerable promise for enhancing student engagement, comprehension, and performance.

AI-powered educational technologies have evolved rapidly, driven by advances in natural language processing (NLP), machine learning, and educational data mining. These tools enable real-time analysis of student submissions and provide instant feedback on elements such as grammar, organization, coherence, and content accuracy (Zhang et al., 2019). AI-generated feedback systems are increasingly used in higher education to supplement traditional instructional methods, offering scalable support in large and diverse learning environments (Abbas et al., 2023). Given these rapid advancements in AI-powered educational technologies, there's a clear alignment with global efforts towards creating more equitable, accessible, and personalized education systems, particularly in contexts where student populations are geographically dispersed, such as in open distance learning education system.

A growing body of research supports the effectiveness of AI-generated feedback in improving academic writing and learning outcomes. For instance, Dong (2023) highlights the role of AI-enhanced pedagogy in refining student writing and easing the feedback burden on educators. The use of machine learning algorithms allows these systems to tailor responses based on individual performance and learning patterns, offering constructive, non-judgmental input that helps students make immediate revisions. Li et al. (2020), through a meta-analysis,

concluded that students receiving AI-generated feedback showed significantly greater improvements in writing quality than those relying solely on human feedback. These findings indicate that AI can play a critical role in shaping students' writing development through continuous, formative assessment.

AI's potential to personalize learning also contributes to improved student motivation and self-regulated learning. Cheng and Tsai (2021) found that the immediacy of AI feedback enhanced student engagement by promoting a sense of autonomy and accountability. Similarly, Nazari et al. (2021) demonstrated that digital writing assistants powered by AI not only improved academic writing among non-native postgraduate students but also increased their confidence in using educational technologies. These outcomes are particularly relevant to ODL institutions, where physical separation from instructors often results in reduced engagement and delayed support.

The integration of AI-generated feedback has also been shown to benefit educators and institutions. By automating routine and repetitive feedback tasks, AI frees up instructors to focus on higher-order concerns such as content development, critical thinking, and student mentorship (Shute, 2008; Baker & Inventado, 2014). Additionally, AI systems can analyze aggregate student data to identify common learning obstacles and inform instructional design thereby enabling more targeted interventions at the institutional level.

Despite its promise, the use of AI-generated feedback also introduces several challenges. One key concern is the reliability and accuracy of the feedback. While NLP algorithms have become more sophisticated, they can still misinterpret context, nuance, or culturally embedded meanings, particularly in non-native English writing (Zhang et al., 2019). Inaccurate or generic feedback may not only mislead students but also erode their trust in the learning system. Another challenge lies in the lack of emotional and motivational cues that human feedback typically provides. As Hattie and Timperley (2007) note, effective feedback should not only guide improvement but also encourage persistence and resilience. AI systems often lack the empathetic tone and human touch that fosters a sense of connection between students and their learning journey (Cheng & Tsai, 2021).

Ethical considerations are also at the forefront of AI integration in education. These include concerns over data privacy, content ownership, algorithmic bias, and the use of student submissions to train AI models (Gonzalez et al., 2020). Institutions adopting AI tools must establish clear guidelines to ensure transparency, student consent, and equitable access to technological resources. Additionally, educators need professional development to effectively interpret AI-generated data and support students in navigating these systems (Baker & Inventado, 2014). Without such support, the benefits of AI may be unevenly distributed or misunderstood.

To address some of these challenges while capitalizing on the strengths of AI, hybrid instructional models have been proposed. These models combine the efficiency of automated feedback with the empathy and contextual understanding of human instruction (Dimitriadou & Lanitis, 2023). Such blended approaches are especially important in distance education, where the risk of student isolation is high. Teacher involvement remains essential in helping students make sense of AI feedback, especially in areas like argument development, critical reasoning, and ethical writing practices (Baker & Inventado, 2014).

A notable application of AI-generated feedback within a real-world educational context is Studiosity, a digital academic support platform that uses both AI and live tutoring to deliver feedback on student writing. Studiosity offers services such as real-time writing support and live chat tutoring, integrated seamlessly into university learning management systems. It has been implemented across several institutions in the UK and Australia, showing considerable success in improving student performance and satisfaction. At the University of Lincoln, 79% of students using Studiosity achieved a pass grade or higher, with 32% achieving merit or

distinction. At the University of London, over 3,900 students created Studiosity accounts, and hundreds actively engaged with its feedback services within weeks of the platform's full launch. Students have shared positive testimonials, citing improved time management, better understanding of academic expectations, and enhanced confidence in writing (https://www.studiosity.com/success-stories).

These outcomes underscore the platform's ability to provide personalized academic support at scale, which is a critical requirement for ODL institutions such as AIOU. However, much of the existing research and implementation of Studiosity has been in Western higher education contexts. There is a noticeable gap in the literature when it comes to understanding how such platforms function in developing countries, particularly in South Asian ODL systems, where infrastructural, pedagogical, and cultural factors may influence student interaction with AI-based tools.

This study seeks to fill that gap by evaluating the effectiveness of Studiosity's AI-generated feedback within AIOU's unique educational environment. It aims to assess not only the immediate impact of AI feedback on student comprehension and academic performance but also its usability, scalability, and integration within AIOU's digital infrastructure. The findings will contribute to the broader discourse on the role of AI in distance education and provide valuable insights for policymakers, educators, and technology developers seeking to enhance academic support services in similar contexts.

Theoretical Frameworks

One of the key theoretical frameworks for AI-assisted feedback in academic writing is the constructivist approach to learning (Dong, 2023; Nazari et al., 2021). This approach emphasizes the role of the learner in actively constructing their own understanding, with the teacher or AI system acting as a facilitator or guide. Instead of providing explicit answers, these systems can pose thought-provoking questions and offer nuanced guidance that stimulates deeper engagement with the writing process, ultimately fostering independent learning and critical thinking skills (Dong, 2023).

Furthermore, AI-driven tools can also be aligned with cognitive load theory, which suggests that learning is most effective when the cognitive load on the learner is optimized (Dong, 2023). By automatically identifying and addressing common writing errors, these tools can significantly reduce extraneous cognitive load, allowing students' mental resources to focus on higher-level aspects of writing, such as argumentation, critical analysis, and information synthesis.

Methodology

To evaluate the success of the pilot project, specific criteria and measurement methods have been established. Effectiveness was assessed based on improvements in student engagement, comprehension, and academic performance measured through a combination of pre and post-assessment surveys administered to participating students. The surveys were designed to capture quantitative data on academic outcomes as well as qualitative feedback regarding students' perceptions of the platform's usability, clarity of feedback, and overall learning experience. Additionally, tutors' observations and satisfaction with the integration served as a supplementary metric for evaluating the platform's academic impact and operational feasibility within AIOU's distance learning environment.

Sample Size and Technique

A sample of 5000 students was selected from various semesters of graduate and post-graduate programs at AIOU. The selection was made to include students from diverse disciplines and geographic locations to ensure the results were reflective of the university's broad student base. The sampling technique was stratified to ensure that students from different degree programs were adequately represented.

Implementation Strategy

The Studiosity platform was integrated directly into AIOU's Learning Management System (LMS), allowing seamless access via students' course dashboards, whereby students can effortlessly access personalized academic support through a dedicated link available directly on their course dashboards. This integration ensured that students do not need to navigate external websites or create separate accounts. Upon clicking the Studiosity link, students are guided to features such as real-time writing feedback. Additionally, tutors were provided administrative access through the LMS to monitor usage and review feedback trends.

Students also participated in an introductory session that guided them on the key features of Studiosity, including how to submit assignments, receive feedback, and utilize other resources available on the platform. Further, a comprehensive training session was conducted to help tutors comprehend how to guide students in using Studiosity effectively and how to track students' progress through the platform.

Data Collection

To assess the effectiveness of Studiosity, both pre- and post-assessment surveys were conducted:

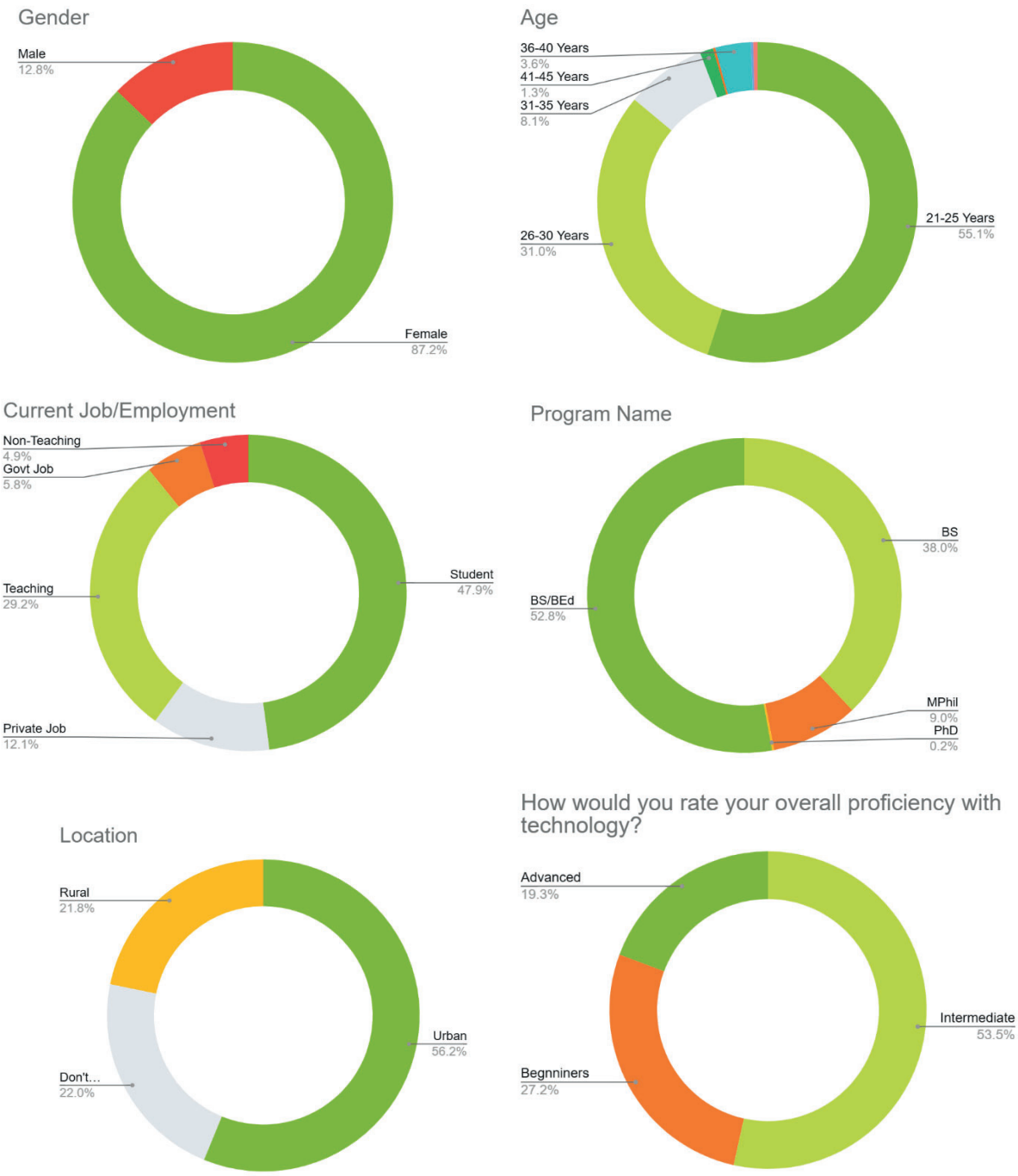
- Pre-Assessment Survey: Prior to using Studiosity, students were asked about their previous experiences with online learning support and their awareness, concerns, and expectations of using AI-driven learning platforms.
- Post-Assessment Survey: After using Studiosity for a specified period, students were asked to provide feedback on the platform's usability, effectiveness in improving academic skills, and overall satisfaction.
- Tutors' Feedback: Tutors were asked through a questionnaire survey about the effectiveness, challenges, and overall satisfaction of using the AI-driven learning platforms for student feedback.

The surveys included both quantitative and qualitative questions, allowing for the collection of measurable data and in-depth personal feedback regarding their learning experiences. Data from the surveys were analyzed to identify patterns in student engagement, effectiveness, and overall academic improvement.

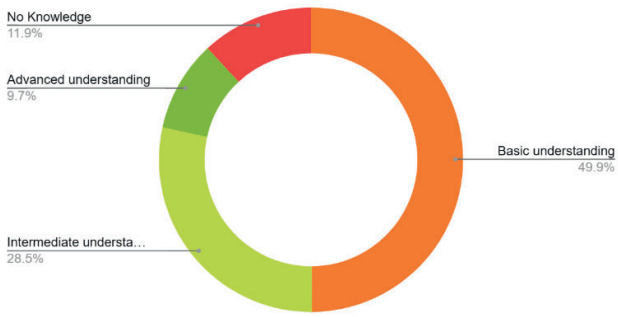
Data Analysis

Pre-assessment Survey

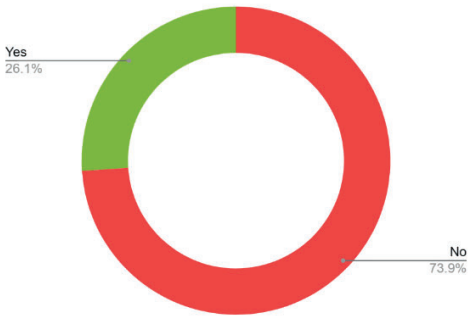
A total of 4,325 registered undergraduate and postgraduate students were selected for this pilot study. Of these, 1,807 students signed up for the service, while 1,411 actively used it. Additionally, 451 of the selected students participated in the pre-assessment survey and completed the online questionnaire shared via Google Survey. The demographic details and other general information collected through the pre-assessment survey are provided below:



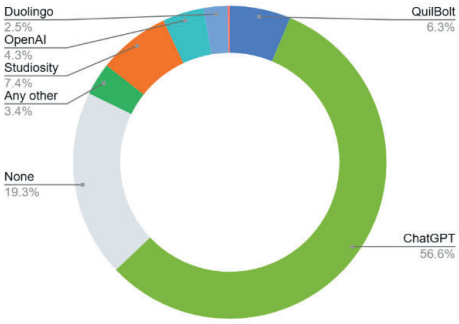
How would you rate your understanding of Artificial Intelligence (AI)?



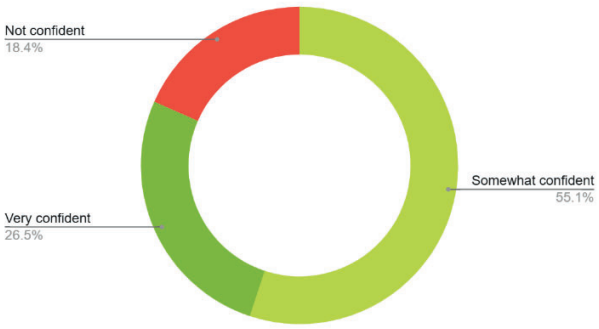
Have you taken any courses or attended any workshops related to AI?



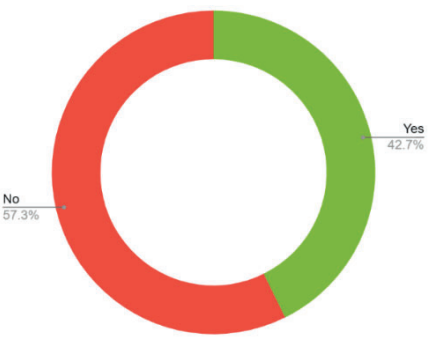
Have you ever used any AI tools or platforms?



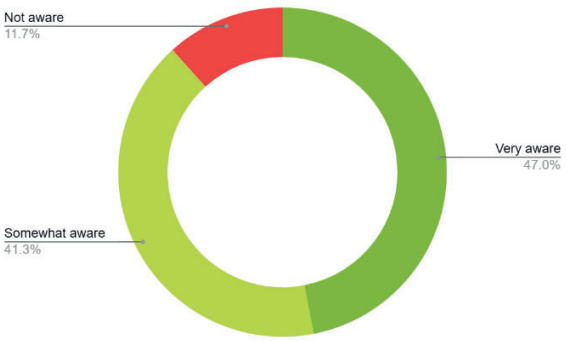
How confident are you in your ability to use AI-generated writeups?



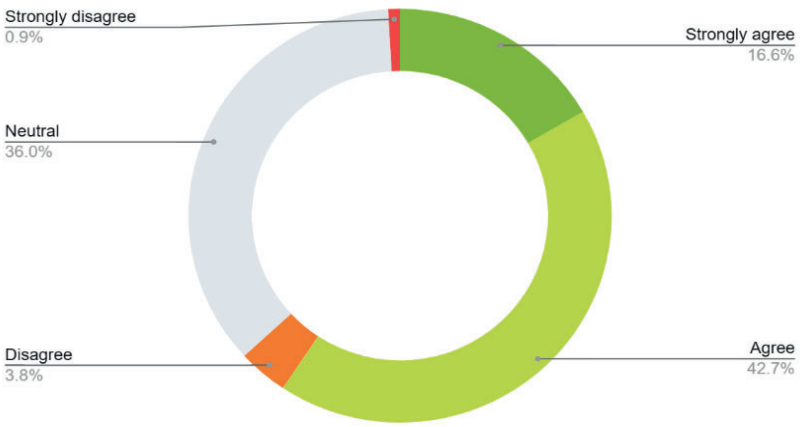
Do you know the software of Studiosity?

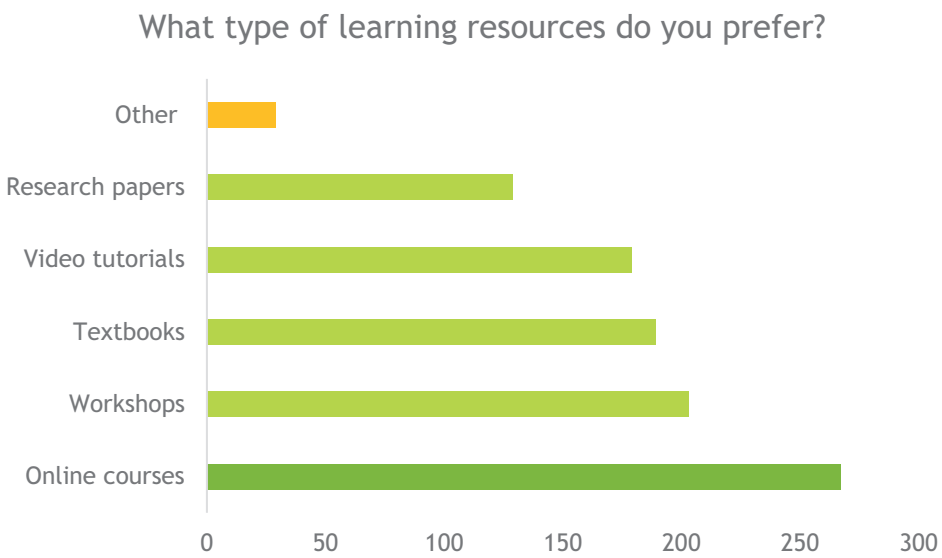


How aware are you about plagiarism?

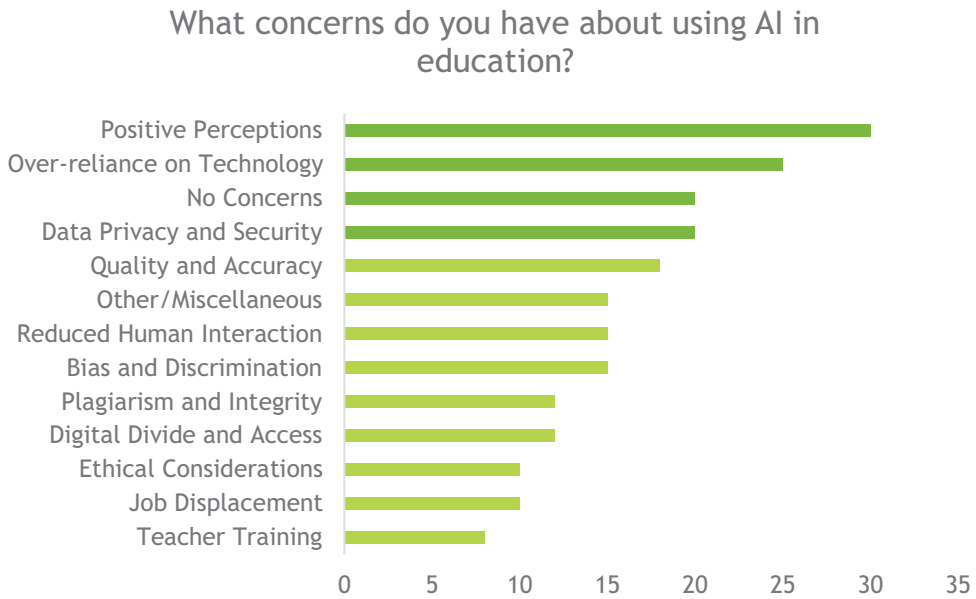


Do you believe AI should be regulated to ensure ethical use?

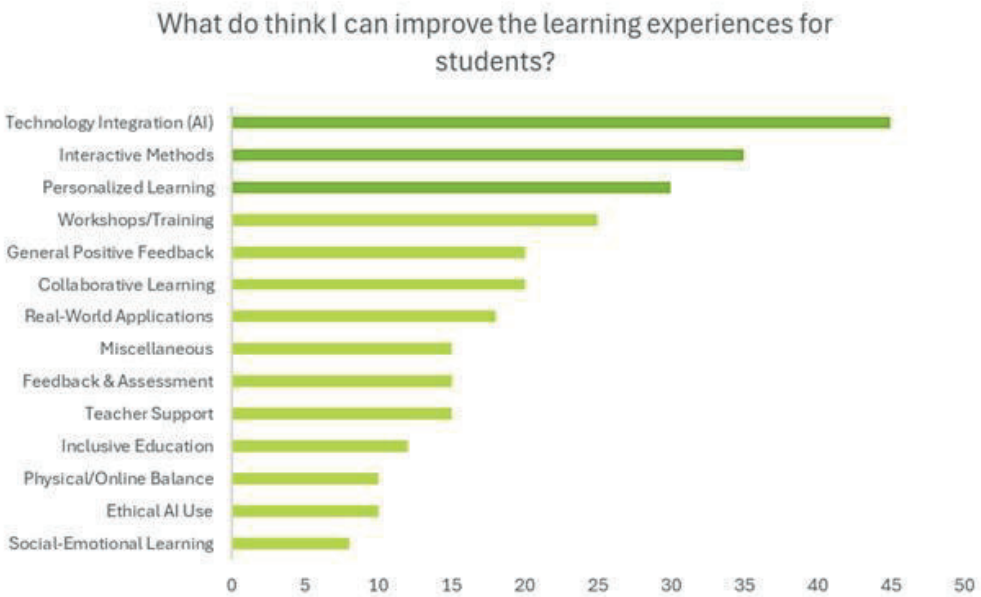




The sample predominantly included female respondents. The median age remains between 21-25. The majority of the respondents were mostly full-time Students enrolled in B.Ed programs, and resided in urban areas. Most of the respondents had moderate tech skills, basic AI understanding, low formal AI training, and high ChatGPT usage. The respondents showed mixed confidence in AI tools, where awareness of Studiosity remained split among them. There was strong support shown for AI regulation. For the majority of the respondents, Online courses were the most preferred resource, followed by textbooks and workshops.



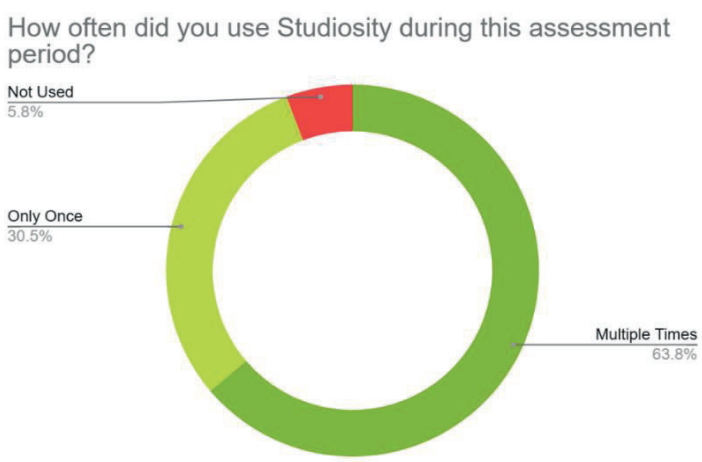
Generally, a positive perception or no concern was observed among the students regarding AI. However, for a significant number of users, the most frequent concerns were over-reliance on technology and data privacy, while others highlighted bias, job displacement, and plagiarism as critical issues. The digital divide and ethical considerations were also notable themes. This categorization provides a clear overview of the diverse opinions and concerns regarding AI in education.



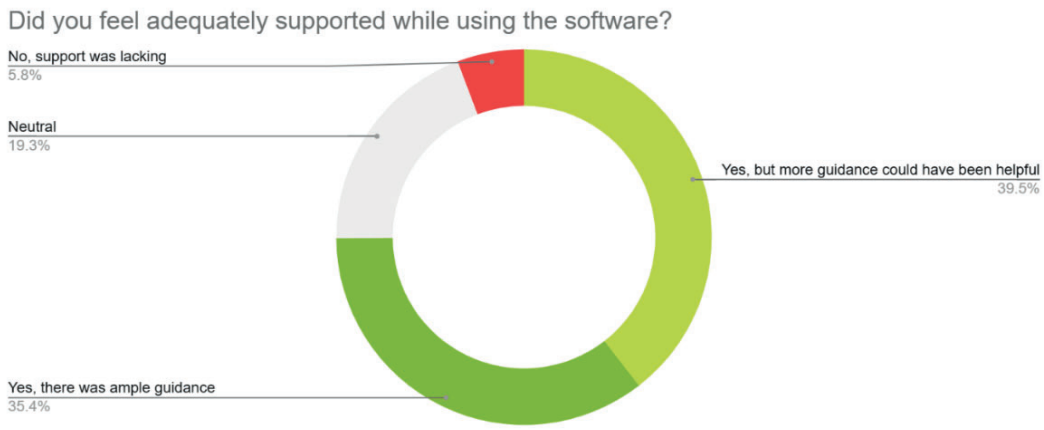
Technology and AI dominated suggestions, emphasizing personalized and interactive tools. Interactive methods (e.g., videos, group work) and workshops were frequently recommended. Ethical AI use and inclusivity were notable themes for addressing the modern challenges. A subset of respondents reported positive feedback without any specific suggestions for improvement. This overview highlights the possible strategies to enhance student learning experiences.

Post-assessment Survey

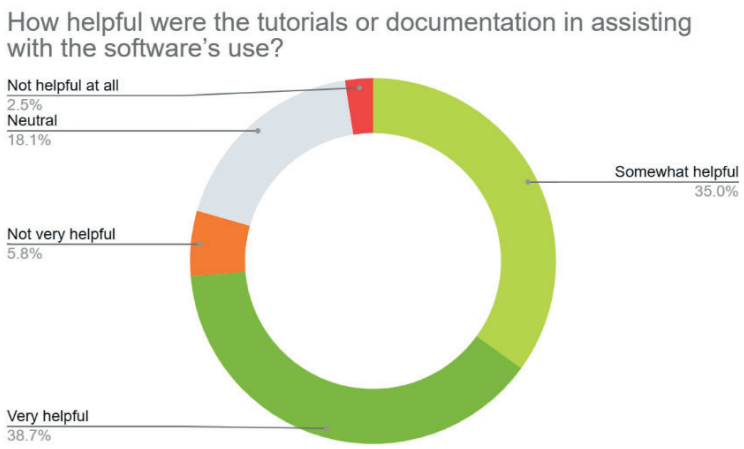
Of the total 451 students who participated in the pre-assessment survey, only 254 students took part in the post-assessment survey shared via Google Survey.



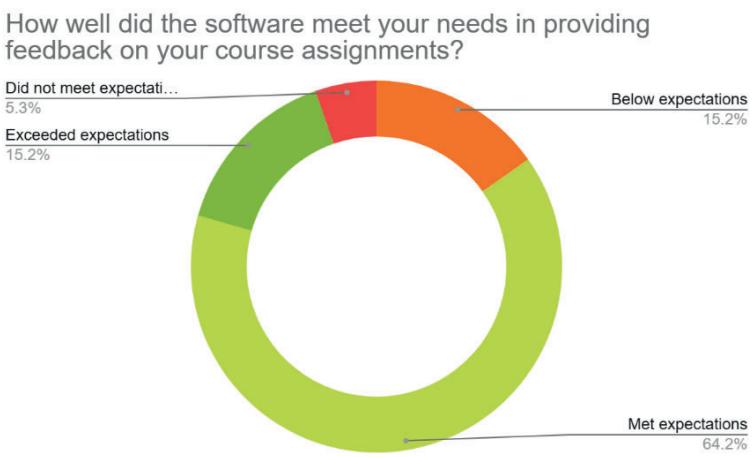
Students reported varying frequencies of usage, with most of them using the software multiple times while others used it only once.



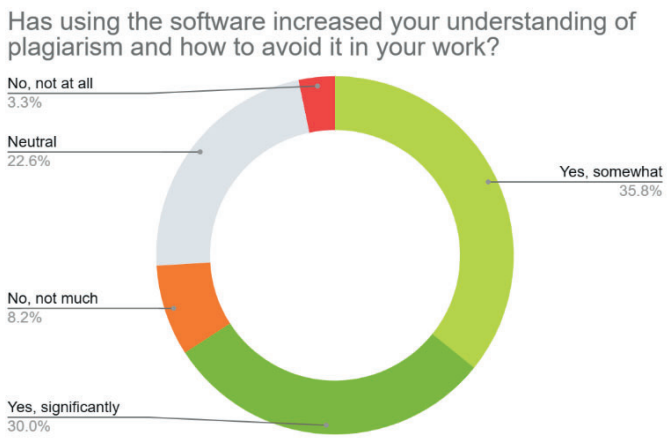
The ease of use of software was generally rated positively, although some users believed that more guidance could have been beneficial.



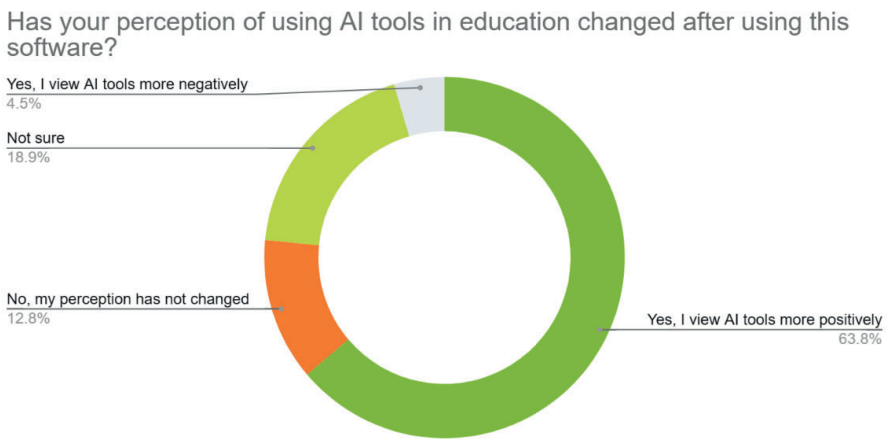
There were mixed responses regarding the helpfulness of tutorials and documentation, indicating that improvements could be made in this area.



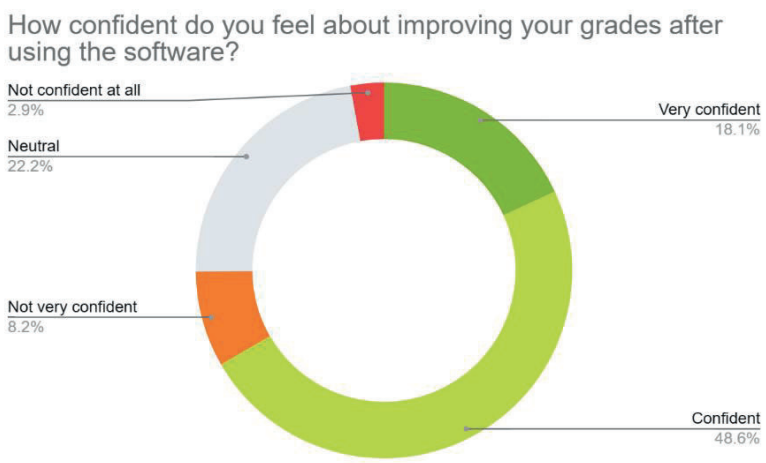
The software met the users' expectations to provide feedback on their course assignments. Users also appreciated the detailed feedback, which helped them understand their errors and improve their writing skills.



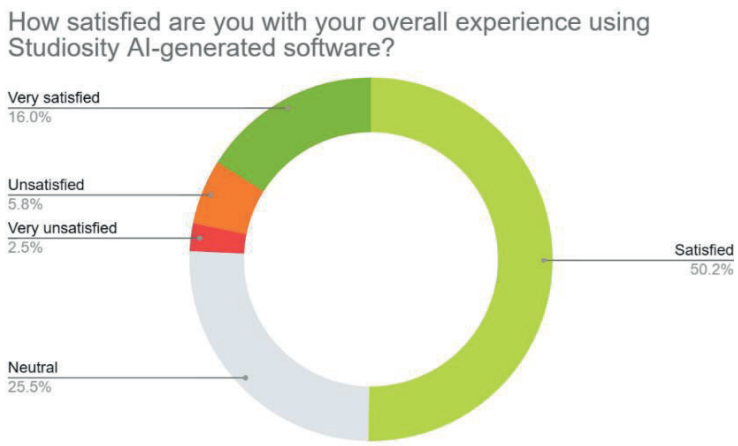
A significant number of users reported an increased understanding of plagiarism and how to avoid it after using the software. This highlights the software's positive role in promoting academic integrity among students.



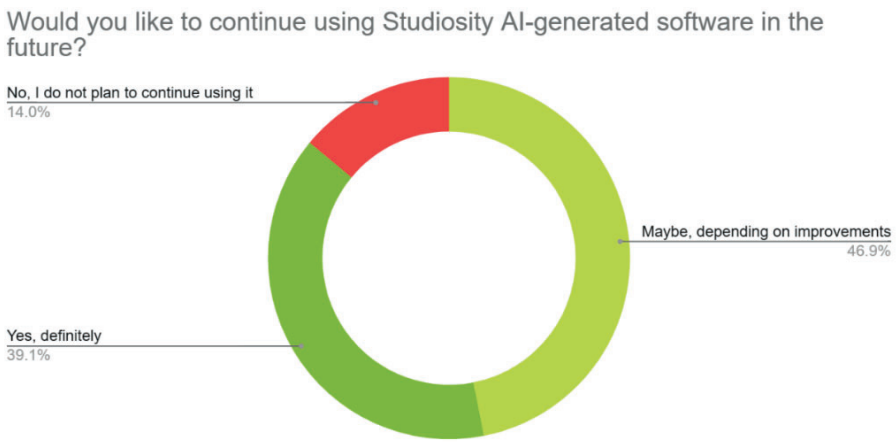
The majority of users indicated a positive shift in their perception of AI tools in education after using Studiosity. This suggests that the software has contributed to a more favorable view of AI's role in learning environments.



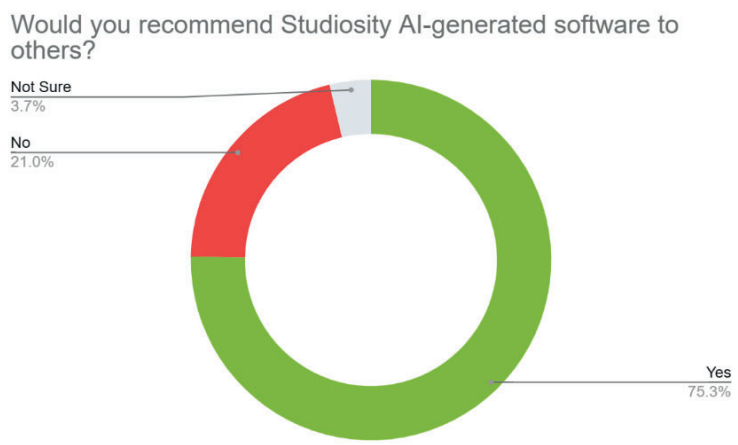
The software was recognized for providing a more conducive learning environment. Users felt that the provided feedback and resources helped them feel more confident in their academic abilities.



Half of the Users reported that the software effectively met their needs in providing feedback on course assignments. This suggests that the software is beneficial for enhancing the quality of student submissions and understanding of assignment requirements.



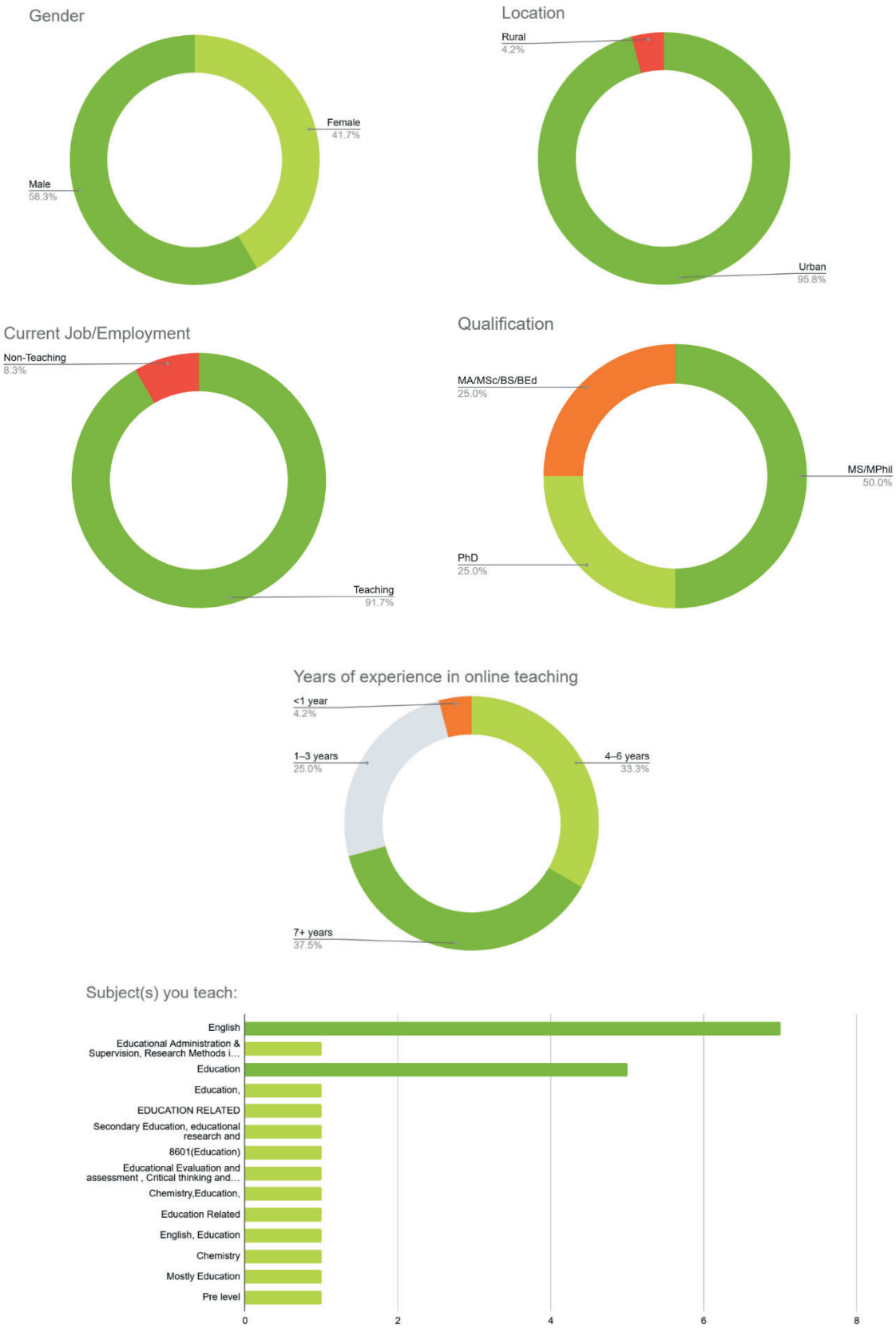
The majority of students responded affirmatively when asked if they would like to continue using Studiosity; however, a significant number expressed that their willingness depended on future updates for improvements in the software.



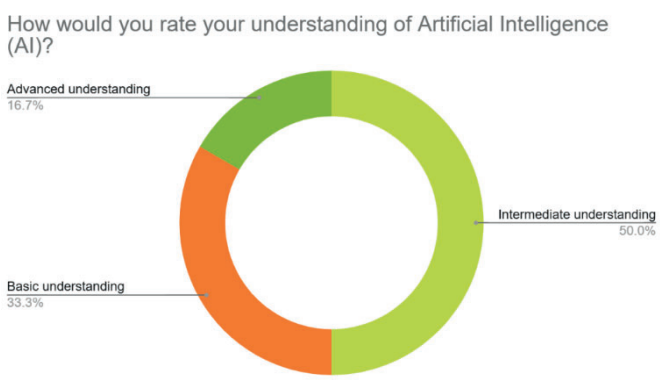
A significant number of users expressed a desire to continue using the software in the future and would recommend it to others. This further reflects a strong endorsement of the software's effectiveness and utility in educational settings.

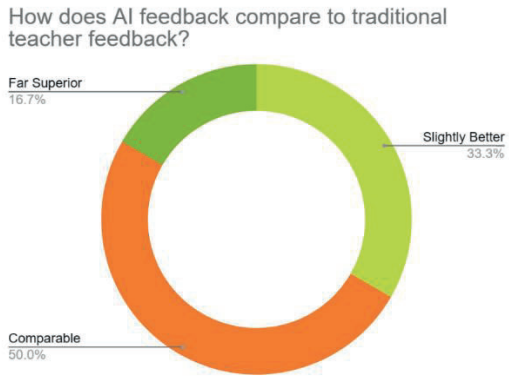
Tutors Assessment Survey

Of the total 46 tutors, 24 have participated in the online tutors survey using Google Forms. The majority of them were male teachers from urban areas.

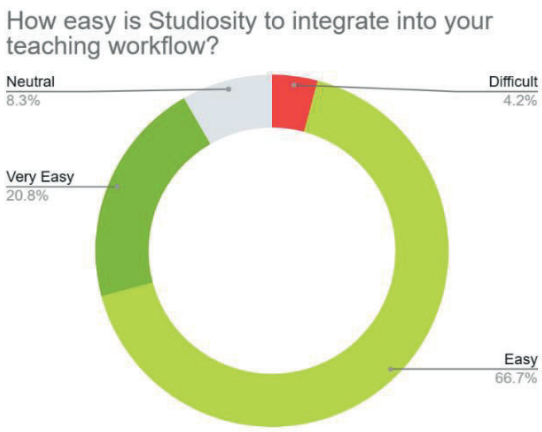


Most of the tutors have an advanced degree (MS/Phil & PhD) and were experienced teachers in their profession.

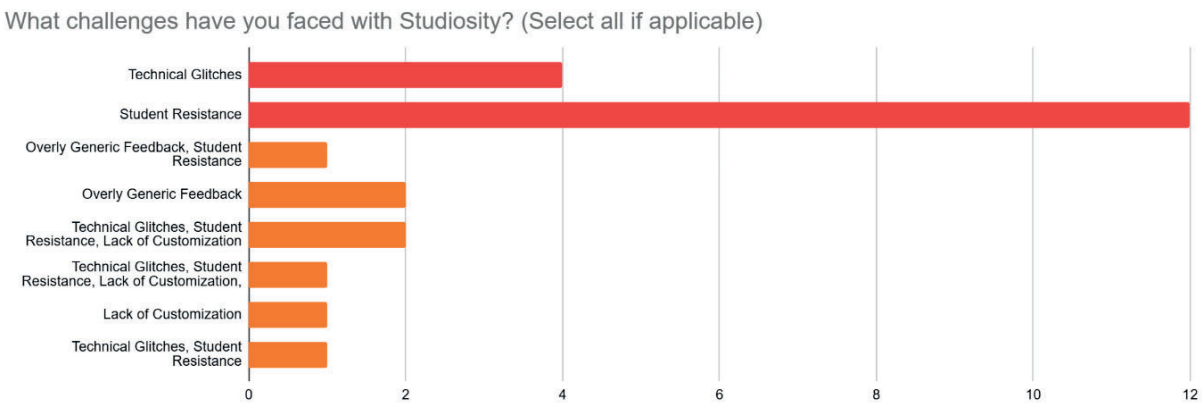




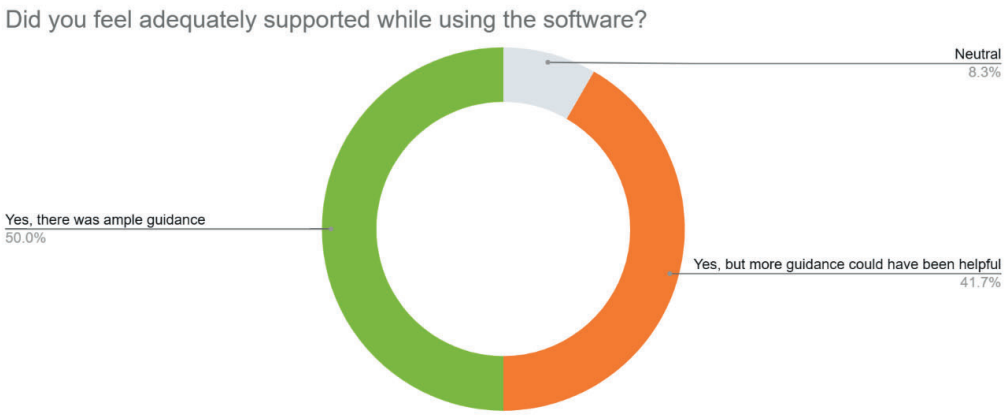
The survey suggests that AI feedback is generally seen as comparable to traditional teacher feedback, although some tutors find it slightly better or worse.



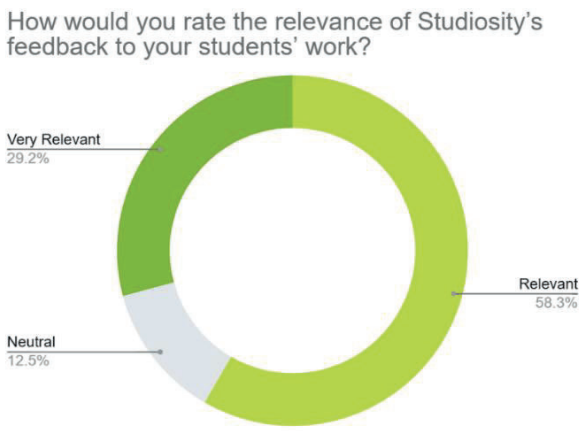
The survey results indicate that a majority of tutors find Studiosity easy to integrate into their teaching workflow.



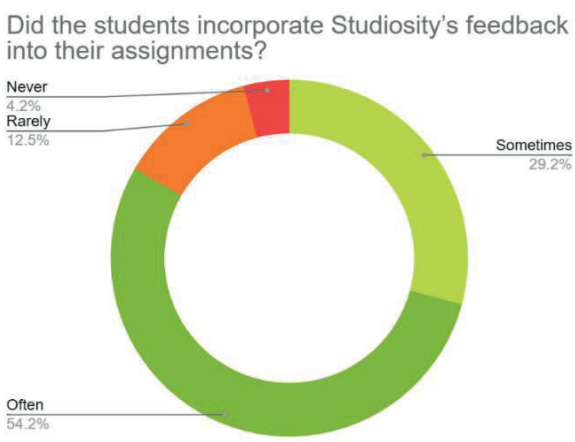
Technical glitches and Students' resistance to using the studiosity remain the main challenges reported by the tutors.



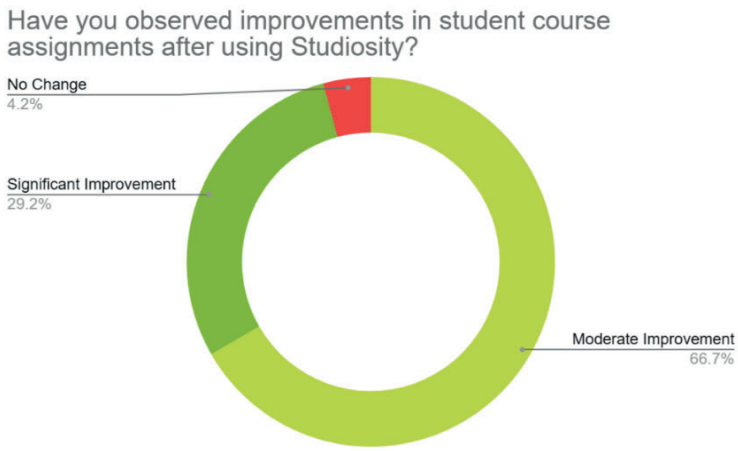
A significant number of tutors suggested that more guidance or training for students could enhance Studiosity's effectiveness.



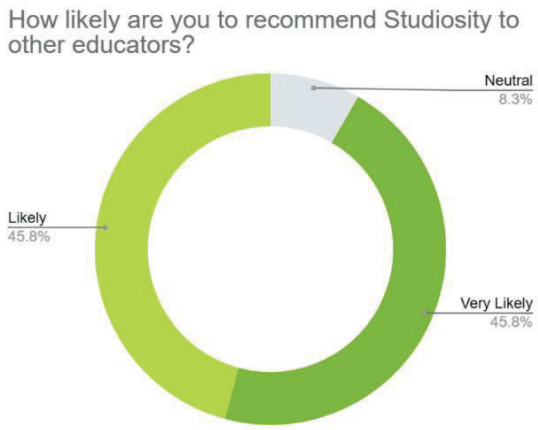
Some tutors mentioned that AI-driven feedback accuracy and expanded subject coverage would enhance Studiosity's effectiveness. In some instances, tutors suggested that the software needs improvement with its data analytics and reporting and further guidance.



Studiosity's feedback was generally rated as relevant to students' work, with many tutors observing that students incorporated the feedback into their assignments.



Many tutors observed moderate to significant improvements in student course assignments after using Studiosity. Studiosity can improve the quality of content, reduce checking time, and provide detailed feedback.



Findings

The Findings highlight the positive impact of Studiosity on students' learning experiences, particularly in enhancing understanding, confidence, and overall satisfaction with academic support tools. However, the feedback also suggests areas for improvement, particularly in guidance and documentation, to further enhance the user experience. Users of Studiosity AI-generated software have expressed specific desires regarding the feedback they wish to receive. Here are the key areas of feedback that users find most valuable:

- Users expressed a desire for more detailed and personalized feedback on their assignments. They suggested that the software could improve by offering specific examples or suggestions tailored to individual writing styles and needs, which would help them understand their mistakes better and learn from them. Users want comprehensive feedback on their course assignments that goes beyond surface-level comments. They are looking for insights into their writing structure, argument clarity, and overall coherence, which would help them understand their strengths and weaknesses better.
- Some users mentioned that the interface could be more intuitive and user-friendly. They suggested simplifying navigation and making it easier to access different features of the

software, which would enhance the overall user experience and make it more accessible for all students

- There was a call for additional educational resources to be integrated into the software. Users indicated that having access to more tutorials, guides, and examples related to plagiarism and academic writing would further support their learning and understanding of these critical topics.
- Feedback on how to effectively utilize the software's features is also important to users. They want guidance on which tools and resources within the software can best support their learning and writing processes, ensuring they make the most of the available technology.
- Users suggested that incorporating more interactive elements, such as quizzes or practice exercises related to plagiarism and writing skills, could make the learning process more engaging. This would not only help reinforce their understanding but also make the software more engaging. There is a strong desire for feedback that enhances their understanding of plagiarism. Users want clear explanations of what constitutes plagiarism, how to avoid it, and specific examples of how to properly cite sources. This feedback is crucial for helping them develop better academic writing skills.
- Some users also pointed out that while the AI is helpful, sometimes it lacks the ability to understand nuanced contexts in writing. They recommended improvements in the AI's capability to analyze and provide feedback on complex ideas or arguments, which would enhance the quality of the feedback received.
- Users are interested in feedback that boosts their confidence in improving their grades. They seek constructive criticism that not only highlights areas for improvement but also encourages them by acknowledging their progress and potential.
- Users desire feedback that reflects their overall satisfaction with the software. They want to know how their experiences compare to their expectations and whether the software is meeting their educational needs effectively.

The users of Studiosity suggested improvements focused on enhancing feedback mechanisms, improving the user interface, expanding educational resources, increasing interactivity, and addressing the limitations of AI in understanding complex writing contexts. These suggestions reflect a desire for a more effective and user-friendly educational tool. Users of Studiosity are looking for detailed assignment feedback, enhanced understanding of plagiarism, confidence-building insights, guidance on feature utilization, and reflections on their overall experience. These specific feedback areas are essential for users to maximize their learning and improve their academic performance.

Conclusions

- Studiosity is easy to use for both tutors and students, facilitating the identification of common errors and corrections needed in student assignments.
- The tool helps reduce tutors' time checking assignments, allowing quicker evaluations and feedback. Students often show significant improvement in their assignments when utilizing Studiosity, which indicates its effectiveness in enhancing educational outcomes.
- Studiosity provides structured guidance that helps tutors improve the quality of assignments and better support their students.
- The feedback generated by Studiosity is noted for being accurate and helpful, contributing positively to the grading system and overall student support.

- The use of Studiosity has led to better assignment quality and more effective support for students, which is crucial for their academic success.
- While Studiosity is a powerful resource, it does not replace the personalized mentorship that tutors provide, emphasizing the importance of human interaction in education.

While Studiosity serves as a valuable educational tool that enhances the learning experience for students and also supports tutors in their evaluation and guidance roles, however, the feedback received from both students and tutors offered a range of insights and suggestions that could further enhance the effectiveness and functionality of Studiosity.

Recommendations

Based on the feedback received through the online surveys, this report highlights several key areas where further investigation into additional features could enhance user experience and effectiveness:

- There is a consensus that the software should provide more tailored guidance to students based on the fundamental components of their questions rather than generic feedback. This approach could enhance the learning experience by making it more relevant to individual needs.
- Investigating more detailed feedback options could help users to better understand their strengths and weaknesses. This could include personalized feedback tailored to individual learning styles and needs, which may improve user satisfaction and learning outcomes.
- Oreitnation sessions before using the software could alleviate the workload on tutors and empower students with required training and resources. This could lead to improved user interface experiences and better feedback mechanisms.
- Encouraging students to revisit past feedback with tutors for further clarification can promote continuous improvement. This system could help students deepen their understanding and enhance their learning outcomes.
- While the users mentions awarness and understanding of plagiarism, provsion of plagiarism detection featuresin the software could be beneficial for both tutors and students. This would not only help maintain academic integrity but also assist students in understanding proper citation practices.
- A key factor in the effective use of Studiosity is motivating students to engage with the software. The inclusion of the analytics tools that track user progress over time could provide valuable insights into learning patterns. Users could benefit from visual representations of their improvement, and may motivating them to engage more with the software.
- Expanding the software's features to include offline access, multilingual support, and accommodations for students with disabilities would make Studiosity more inclusive and appealing to a broader audience. This enhancement could significantly improve accessibility for all students.
- Exploring the potential for a mobile version of the software could increase accessibility for users who prefer to work on assignments on-the-go. This could broaden the user base and enhance the overall utility of the software.

The insights gathered from the contexts highlight the importance of personalized guidance, effective training, continuous feedback, and inclusivity in enhancing the effectiveness of Studiosity. Implementing these suggestions could lead to a more supportive and engaging learning environment for students. Investigating these additional features, such as enhanced

feedback mechanisms, plagiarism and AI detection (such as offered by Paperapl – a software by Microsoft), user customization, analytics, and mobile accessibility, could significantly improve the effectiveness and user satisfaction of Studiosity. These enhancements could lead to a more comprehensive educational tool that meets diverse student needs.

Limitations

Several limitations must be acknowledged despite the promising outcomes observed in the pilot implementation of Studiosity at AIOU. These limitations may have influenced the interpretation and generalizability of the findings of this study:

- The participation in surveys remained limited, as 4,325 students were registered for the pilot, however, only 451 participated in the pre-assessment survey and 254 in the post-assessment. This response rate limits the representativeness of the data and may skew the findings toward those students who were more engaged or technologically inclined.
- The participation of the registered tutors was also limited, where out of 46 tutors, only 24 participated in the online survey. Since tutors play a crucial role in facilitating and interpreting AI-generated feedback, a broader sample might have provided a more comprehensive understanding of the tool's impact, effectiveness as well as its limitations.
- Further, the evaluation period for evaluating Studiosity's impact was relatively brief. A much longer timeframe would be required to fully capture changes in academic performance and sustained engagement over multiple semesters.
- Given the diverse geographical and socioeconomic backgrounds of AIOU students, the possibility of some participants facing challenges accessing the Studiosity platform due to limited internet connectivity, lack of digital literacy, or unavailability of computers or other digital devices might have affected their usage or perception.
- Mostly, the feedback was gathered through self-reported surveys, which are inherently subject to biases. This could also have affected the reliability of the results.
- This pilot study did not take into account differences in writing expectations across various academic disciplines or how well Studiosity works in different subject areas. The usefulness of feedback may depend on the type of assignment and the writing norms of each field.
- Further, some students and tutors reported needing more training and clearer guidance to effectively use Studiosity. Without proper orientation, users may not have fully benefited from the platform's capabilities.

Given the above limitations, it is to be underscored that the study focused solely on AIOU's unique institutional structure and learner demographics. Findings may not be directly generalizable to other open and distance learning institutions, especially in different national or cultural contexts.

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