

Exploring Student Use of AI for Ethical and Inclusive Blended LearningAdbhut Pratap Singh¹ & Anupam Rajauria²DOI: <https://doi-ds.org/doi/10.2025-66767479/ADEDJ/V2/I2/APAN>

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Abstract

The increasing accessibility of generative AI tools such as ChatGPT, Grammarly, and Bard has altered how students react to blended learning environments. While these tools promise personalized support and enhanced academic performance, their integration raises significant questions around ethics, inclusion, and pedagogical relevance, particularly within school settings in developing regions. The present research investigates how secondary school students (Classes 9–12) in Lucknow district use AI tools in blended learning, and how their experiences reflect ethical awareness, access equity, and learning outcomes. Adopting a sequential explanatory mixed-methods design, the research involved a structured questionnaire administered to a diverse student sample, followed by semi-structured interviews with selected participants. Results stipulate how participants utilize AI tools for schoolwork, but they don't know much about ethical limits, how to critically evaluate AI-generated content, or how access is distinct for individuals from various socioeconomic groups. Participant feedback suggests a dual relationship with AI, showing both dependence and autonomy. Participants also communicated a need for teacher support and clear school policies. This research shows a need for digital literacy, dependable tech, and ethical guidelines to ensure AI supports student-centred education.

Keywords: AI in education, blended learning, digital ethics in education, secondary education, digital equity.

Introduction

Over the past few years, artificial intelligence has started to make a noticeable mark on education—not just by shaping what students are taught, but by influencing how they go about learning. One of the clearest changes has been the rise of blended learning, where traditional classroom teaching is combined with digital tools to create lessons that are more flexible, interactive, and tailored to different learning styles. Students now regularly turn to platforms like Grammarly, ChatGPT, and Bard to polish their writing, summarise material, translate content, or make sense of challenging ideas. For many, these tools open the door to more independent learning, while also giving teachers the flexibility to adapt their methods to the needs of each class (Luckin et al., 2016; Mintz et al., 2023).

But the picture is not entirely straightforward. Alongside their many benefits, AI-driven tools have sparked debates about fairness and academic integrity, especially when it comes to how students' work is assessed. India's National Education Policy (NEP 2020) echoes the global recognition of blended learning as a forward-looking approach, yet the rapid spread of generative AI has raised fresh questions about access, regulation, and even the broader purpose of education itself. Many children experiment with AI without a teacher's oversight, which can leave them with little clarity about the right or wrong way to use it (Williamson & Eynon, 2020).

This uncertainty points to bigger questions: how exactly are students engaging with AI, and in what ways does it shape their learning experiences? Concerns over overreliance, misinformation, and plagiarism (Selwyn, 2019; Floridi et al., 2018) are well-documented, yet studies suggest that most students use AI for straightforward academic tasks such as completing homework or preparing for exams (Zawacki-Richter et al., 2019). The real challenge is that access is far from equal. Household income, gender, and whether students own compatible devices all affect their ability to benefit from these tools (OECD, 2021). These disparities are particularly visible in Indian secondary schools, where gaps in education policy and chronic underfunding have long limited opportunities. And despite the growing interest in AI in education, we still know relatively little about how students themselves view and experience it (Holmes et al., 2023).

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This study explores the use of AI among secondary school students (Classes 9-12) in the Lucknow district addressing ethical, inclusion, and teaching concerns with a blended sequential explanatory framework, and aims to guide the thoughtful incorporation of AI technology in educational settings.

Theoretical Framework

Present study employs socio-cultural learning theories (Vygotsky & Cole, 1978; Bruner, 1996) to comprehend how students actively and independently learn with the utilisation of AI tools. The ethical dimension is informed by critical pedagogy (Freire, 1970) which addresses agency, power, and the need for AI to be used in a thoughtful, responsible way. Also, the analysis of algorithmic bias and issues of access is informed by critical data studies (Williamson & Eynon, 2020) and the digital equity framework (OECD, 2021). Altogether, these perspectives provide a comprehensive view of the ethical responsibility and critical engagement surrounding AI-enabled learning.

Literature Review

The growing emphasis on student-focused tools like ChatGPT and Grammarly in blended learning environments is an indication of paradigmatic change in pedagogic practice through the use of AI (Zawacki-Richter et al., 2019). Although these tools provide flexibility and personalized feedback, they also create issues of academic integrity, reliance, and the enhancement of analytical thinking (Selwyn, 2019; Holmes et al., 2023). Blended learning is finding favour as an integrated model of learning after the pandemic with the support of India's NEP 2020. Its success is in the wise use of AI (Luckin et al., 2016).

Students primarily use AI for writing, homework, and doubt-solving, but they frequently lack ethical awareness, which results in behaviours like verbatim copying of responses (Floridi et al., 2018; Mintz et al., 2023; Yacoub & Hall, 2023). Even though AI is being used more and more, research is still primarily concerned with teacher or higher education viewpoints, ignoring secondary school students' voices, especially in underdeveloped nations like India (Williamson & Eynon, 2020; Zawacki-Richter et al., 2019).

Access and participation become more challenging through digital inequality (OECD, 2021). Additionally, not many studies look at how students perceive AI's pedagogical function and equity, which emphasises the need for research that emphasises student viewpoints on inclusive and moral AI use in blended learning.

Methodology

To better understand student perspectives, semi-structured interviews were conducted after a structured survey was used to record usage patterns of AI tools (Creswell & Plano Clark, 2018). Stratified purposive sampling was employed to select secondary school students (Grades 9–12) from both private and government schools in the Lucknow district. A self-made, closed-ended questionnaire with 18 items and a semi-structured interview schedule with 12 items were utilized to collect data. Descriptive and inferential statistics were employed to analyse quantitative data, and thematic analysis was employed to examine qualitative responses (Braun & Clarke, 2006). Ethical protocols included data anonymisation, student assent, and informed consent from school authorities.

Results

In the Lucknow district, 412 students from eight schools, 190 (46.12%) from four government schools, and 222 (53.88%) from four private schools filled out the survey. There were 210 (50.97%) male students and 202 (49.03%) female students in the sample. Equal numbers of respondents came from each class, with 102 (24.76%) from classes 9 and 12 and 104 (25.24%) from classes 10 and 11.

In the past six months, 297 (72.09%) of the sample's students reported using at least one AI tool for academic goals, like Google Translate, Bard, Grammarly, or ChatGPT. These resources were most used by students to finish assignments, understand complex ideas, and produce better writing. A noteworthy 173 (41.99%) students acknowledged directly copying AI-generated responses into their assignments, despite the general favourable opinion of AI's utility. Lack of institutional or pedagogical guidance is eminent, as only 49 students (11.89%) informed that their educators had structurally discussed the ethical use of such tools.

Independent samples t-tests were used to investigate group differences in the utilisation of AI tools. No statistically significant difference in the frequency of AI engagement between male ($M = 2.87$, $SD = 1.03$) and female ($M = 2.75$, $SD = 1.01$) students ($t(410) = 1.24$, $p = .216$) was observed. However, a statistically significant difference by school type was observed as students in private schools ($M = 3.12$, $SD = 0.92$) used AI tools more often than their classmates in government schools ($M = 2.58$, $SD = 1.08$; $t(410) = 4.72$, $p < .001$), suggesting that private institutions provide better access to digital resources and greater exposure to them.

Class level was also a significant factor in AI use, according to an analysis of variance (ANOVA) ($F(3, 408) = 3.45$, $p = .017$). The number of reported AI tools utilised by Grade 9 and Grade 11/12 pupils differed significantly, as indicated by post hoc Tukey testing. Differences in academic expectations and the prevalence of digital literacy at the senior secondary levels may be the cause of this.

As part of the study, the researchers conducted interviews with twelve students from various grades and schools. From these conversations, four key themes emerged.

The first theme highlighted students' perception of AI as a valuable learning aid. Many described AI tools as both reliable and convenient, often turning to platforms like ChatGPT or Bard for quick answers when teachers were unavailable. One 11th-grade participant remarked that Bard could explain concepts "like a teacher, but faster."

The second theme reflected uncertainty about the appropriate use of AI in schoolwork. Several students admitted to directly copying text generated by ChatGPT for assignments, though many were unsure whether such practices were acceptable or ethical. A student in Class 10 stated, "I copied ChatGPT answers, but I don't see it as wrong, unless it's a problem because teachers say it is."

The third issue, access restrictions, affected the most government school students, particularly those in Class 10 and Class 9. Most people were unaware of or had never used AI tools since they lacked personal devices or access to the internet. "I have never used ChatGPT," remarked one pupil, "I only hear other folks discussing it".

The final theme that emerged from the interviews was the necessity of instructor guidance. The pupils pleaded with the teachers to explain the proper and correct applications of AI in the classroom. One of the students in Class 12 stated, "Teachers should teach us the right way to use AI."

All the findings from the qualitative and quantitative stages all lead to the same story: students from various types of learning institutions and graduating classes use AI tools extensively; however, they possess huge knowledge deficits in terms of ethics, access equality, and teaching support. Interestingly, students in higher grade levels and private schools have statistically higher rates of AI usage, reflecting gaps in their digital participation readiness. Gender, however, was not found to affect AI usage.

In addition to being grateful for the prompt intellectual assistance provided by AI tools, students also exhibited ethical uncertainty and, in most instances, dependence. Academic integrity and critical engagement is questioned by the widespread use of AI-generated content, which 173 (41.99%) of the respondents acknowledged. The urgent need for structured AI literacy and ethical digital education is further highlighted by the 363 (88.11%) students who reported a lack of teacher involvement.

Understanding these trends is enhanced by incorporating student perspectives through interviews. In addition to wanting greater access, students also long for responsible adult supervision when navigating the potential and constraints of AI. Together, these findings demonstrate that to guarantee AI supports equitable, moral, and meaningful learning for all students, institutional policies, teacher preparation, and inclusive digital infrastructures are required.

Discussion

The study's conclusions demonstrate the potential and difficulty of integrating AI tools into blended learning settings for students. The results can be viewed as supporting the case for including inclusive and ethical AI at the senior high school level based on the theoretical frameworks of constructivism, socio-cultural, critical pedagogy, and digital equity.

The students made it clear that AI tools afford them opportunities for independent learning consistent with the constructivist learning theory of Bruner (1996). Learners seem to use AI as cognitive scaffolding for their knowledge gaining learning especially when using tools like ChatGPT and Bard to address the questions, justify their thinking, and enhance the content produced. That independent engagement exemplifies the affordances of AI for personalized learning in blended learning contexts. However, the possibility of an alarming trend of over-reliance on AI was evidenced by the reported proclivity to plagiarize from AI-generated replies. The inappropriate employment of AI raises worries about a possible conflict with constructivist educational goals. This endangers students' abilities to think critically and fully grasp their learning experiences.

From a socio-cultural point of view (Vygotsky & Cole, 1978), AI acts as a go-between for students in both academic and socio-cultural situations. Variations in AI use between upper and lower-level classes, and between private and public school students, show that things like academic needs, digital skills, and institutional resources affect access to these tools. Upper-level students, who face tougher academic challenges, used AI more and saw it as a kind of silent tutor. One of the clearest challenges to emerge from the study was the issue of quality and ethics in students' use of AI especially when there is little direction or vision from those guiding them. The pattern is strikingly like ideas in critical pedagogy (Freire, 1970), which stress the teacher's role in shaping not just skills, but also values. Even though AI tools are now part of many students' daily routines, only a handful said they had ever received any kind of guidance from teachers on the ethical side of using them. This absence is worrying. Without that foundation, it becomes harder for young people to think through how their choices might affect both their school community and society more broadly.

Interestingly, the findings suggest that most students are not deliberately trying to cheat. What they lack is clarity and understanding of where the boundaries lie. In that sense, AI is not necessarily the problem; the bigger opportunity lies in helping students develop the critical thinking needed to make informed and responsible decisions about how they use it.

The interviews also highlighted a familiar but important theme: unequal access. Echoing concerns raised by the OECD (2021), the data showed that students in government schools especially those in rural or low-income areas often have fewer opportunities to work with AI tools compared to their peers in better-resourced private schools. This gap risks deepening existing inequalities in education. While AI could, in theory, help close those gaps, that outcome depends on more than just making the tools available. It requires reliable infrastructure, affordable devices, and hands-on digital skills training. Without those, the technology could end up widening the very divides it has the potential to bridge.

Implications

The study emphasises how urgent it is to incorporate ethical guidance and AI literacy into school curricula. To encourage critical thinking in place of passive dependence, teachers must be prepared to assist students in making positive use of AI tools. Given the substantial access barriers faced by students in government schools, addressing digital inequality is also crucial. To guarantee fair and responsible AI integration, educational policies should place a high priority on inclusive infrastructure, professional development, and student awareness initiatives. In the end, AI should be used to empower students rather than to close educational gaps or jeopardise academic integrity.

Conclusion

Present study examined the ways in which secondary school pupils use AI tools in blended learning and discovered that while usage is high, there are notable gaps in ethical awareness and equitable access. Although AI facilitates individualised and self-directed learning, its abuse and unequal distribution underscore the necessity of inclusive practices and organised guidance. The findings demonstrate how crucial it is to incorporate ethical issues, digital equity, and AI literacy into teaching methods. The advantages of AI in education might continue to benefit the wealthy rather than promoting truly inclusive and responsible learning for all students if educators and legislators do not take the initiative.

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