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Research Article

Bridging the Artificial Intelligence Skills Gap in Learning: An Undergraduate Perspective in Bangladesh

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Abstract
The rapid integration of Artificial Intelligence (AI) into higher education is reshaping teaching, learning, and research worldwide. In Bangladesh, university students are increasingly engaging with AI tools for academic purposes. This research article explores the impact of AI on higher education by examining its effects on the learning process from the perspective of undergraduate students. The study followed a quantitative, descriptive-exploratory research design, using survey questionnaires for primary data collection. The research was conducted using Google Forms among students from six universities from diverse disciplines. Survey data obtained from over 200 students across two private and two public universities. Findings reveal that a majority of respondents use AI tools frequently for academic purposes, writing assistance, and conceptual understanding. The perceived benefits include enhanced learning efficiency, improved academic skills, and access to personalized learning resources. At the same time, students articulated critical concerns regarding data privacy, ethical misuse, diminished creativity, and unequal access to advanced AI technologies. These insights highlight both the opportunities and risks of AI adoption in Bangladesh's higher education sector. The study concludes with recommendations for integrating AI literacy into curricula, developing institutional guidelines, and inclusive use of AI.

Keywords: Artificial Intelligence, Bangladesh, Higher Education, Technology Adoption, Undergraduate.

1. Introduction

A new artificial intelligence (AI)-based learning process that allows interactive learning, personalized counseling, and worldwide access to education for university students has replaced traditional face-to-face instruction as school education has evolved in tandem with the swift advancements in science. Many schools have also been using AI technology in recent years to design and execute high-quality, efficient education and perhaps instructional activities. These technologies, which provide useful scenarios for promoting school modernization and progress, include image processing, speech recognition, natural language processing, augmented reality, and others. However, artificial intelligence (AI) fosters the growth of human learning, perception, emotion, and other intelligences by empowering machine systems to perform human-like mental functions including learning, perception, and emotion (Syarifudin, 2024; Zheng, 2020).

This advancement has brought about educational solutions that consider such issues as AI-assisted learning and AI-assisted teaching. According to the present study, education research on AI is focusing on system innovations like Entrepreneurial tutoring systems, where most of the extant research is higher education oriented (Zawacki-Richter et al., 2019). The AI is also expected to bring drastic effects to the educational sector, altering the methods of teaching by offering new learning

materials to all educators. Individualized instruction, increased access to information, and more open-inclusive learning can be used to radically change the students learning. There are several opportunities (Mahatma Gandhi Institute of Education for Peace and Sustainable Development, 2018). Despite its many advantages AI has several drawbacks as well. Students who use remote teaching methods have a lot of freedom and teachers are unable to control them in real time, which makes it difficult for them to concentrate when they are listening and for teachers to quickly assess their learning progress (Wang, 2021).

In their everyday lives and personal growth, Generation Z makes use of the most recent scientific and technological advancements. Gen Z's primary traits are their extensive, consistent, and long-term usage of social networks, communication, and digital devices in both their personal and professional lives. The phrase "digital natives" is occasionally used to describe them. In addition to the benefits, digitization and the application of artificial intelligence have some risks for both society and individuals. The usage of AI and the digitization of society present a wide range of risks and concerns. Not enough research has been done on the nature of the threat, the extent of the socio-cultural influence, the scope of the coverage, and the systematic nature of their recurrence (Saoud & Jung, 2018). Considering a research conducted by McGovern et al. (2018), the absence of professionalism, the increasing privacy issue, ongoing maintenance, integration, and scarcity of tested applications are part of the factors that make slower AI integration process in Bangladesh and other parts of the world as well.

On the contrary, AI applications have enhanced the socio-economic outlook of Bangladesh. Negligence can have bad consequences but, timely adoption can help a lot to facilitate its unique development. However, there seems to be an inconsistency between the concerns of the AI and its implications by Bangladesh (Wahid-Uz-Zaman, 2019). The inefficient execution and maintenance of the AI systems are poor due to the fact that the developing countries do not have qualified staff that is skilled in AI systems (Dwivedi et al., 2021; Pedró et al., 2019). Recently, the impact of AI on curriculum development is intricate, as it has been studied. In order to be relevant and engaging, AI-based technologies, e.g., can process vast amounts of educational information to identify knowledge gaps, propose more specialized resources, and constantly update the content of the curriculum (Youngstown State University, 2023).

Furthermore, AI enables the development of inclusive learning environments with respect to supporting diverse learning styles and needs, thus, ensuring equity to education (Shriver, 2024). However, there are some disadvantages of adopting AI too, including ethical concerns, the problem of privacy of the data, and the need of teachers to learn how to use those tools effectively (U.S. Department of Education Office of Educational Technology, 2023). In summary, this research will contribute to enhancing the existing knowledge about the perceptions of artificial intelligence implemented by students and its usage and its advantage in the higher education cycle. Its emphasis lies on creating interest in students and their involvement in AI-based classes by introducing new tools of assessment. The objectives of this research were AI adoption & impacts in tertiary education by thoroughly evaluating how actually interpret & operate generative AI resources & how this significantly influences some of the most fundamental skills essential for academic progress like academic integrity, creative thinking, analytical capabilities. This study also focusses on student attitudes & providing an in-depth analysis of positive & negative overview.

2. Literature Review

Advanced deep learning models, like GPT-3, known as ChatGPT and others, have transformed the education sector into computerized solutions backed by Generative AI. The solutions are able to produce human like text, assistance in study work, and give explanation of various types of problems which thus make learning accessible and effective. The solutions are adopted by tertiary students especially to assist in essay work, paraphrasing and summery, which will be save time and increase productivity. For example, ChatGPT can represent step by step solutions to complex problems or fresh ways of thinking about a subject, which is very helpful for students while studying (Fauzi et al., 2023).

However, the newest step by students to employ generative AI has some warning against relying too much on such technologies. While these technologies eliminate inefficiencies, experts maintain that they are retarding the growth of critical thinking, problem-solving and creativity since students merely use AI to accomplish things intellectually. Additionally, teachers are worried about how such tools stifle students' interest in learning things that are most important to be learned. In fact, the necessity of such a balance while applying generative AI to teaching has gained more importance, especially in university like the CCN-UST & others where the learning atmosphere is changing phenomenally quickly (Denny et al., 2023).

One significant obstacle to the effective use of AI in developing countries like Bangladesh is in the shape of infrastructural limitations. Solid internet connection with great speed, high-strength computing equipment, and advanced storage devices are typically the prerequisites to optimum utilization of AI. However, most developing regions lack infrastructural inadequacies, which slow down the converging of AI systems into continuity. Disconnection and poor power supply can postpone the real-time processing demands of AI applications, thus resulting in a digital divide between infrastructure-rich and infrastructure-poor areas (International Telecommunication Union, 2018). The absence of a skilled workforce that is proficient in AI technologies is a major challenge. The developing countries typically struggle with a shortage of machine learning, data science, and AI development experts. It requires a combined effort in the field of education and training programs to bridge this gap. Education institutions must adapt to include programs in AI so that the employees are equipped with the necessary skills to use AI effectively (World Bank, 2019).

2.1. AI Impact on Creativity

For the Gen Zs who already grew up using AI for academic purpose is just giving them newer ways of generating different contents and use these in different sectors. Being open-sourced, these AI-driven creative tools are making creativity easily accessible and available to as many people as possible irrespective of their coding ability. However, there are some issues and risks involved with AI writing such as the copy of the work. The original text is not provided, so the remaining translation cannot be completed, originality of work. The major side effects are as follows: Critics pointed out that overdependence on AI would result in creative imagination in writing being replaced with algorithmically produced output, which would give a uniformed look to the end product. There are questions like copyright most AI programs use existing content as training data. They may end up violating someone's copyright. This raises issues on ownership and copyright in relation to works involved that have employed the use of Artificial Intelligence (Ali et al., 2024).

2.2. Research Gap

As the discussion of above clearly indicates that a huge number of studies has been carried out in the field of Artificial Intelligence (AI). This research bridges a gap by giving statically significant data on AI usage patterns that most of the previous paper has overlooked. The particular focus of this of this

study on the perceptions of the students allowed the comprehensive exploration of regional advantage & drawbacks that were missed to capture by others current similar studies in this region. This work also fills a gap that there is a lack of empirical evidence on the specific effect of generative AI like ChatGPT, Gemini or something similar, on academic overall performance & on learning outcome as well at different educational institution, specifically graduate & post graduate levels.

3. Methods

The study applied a mixed-method approach with quantitative and qualitative aspects to achieve a deep insight into university students' attitudes, adoption patterns, and issues related to the use of Artificial Intelligence (AI) in Bangladeshi higher education. Mixed-method design guaranteed that statistical analysis of patterns and contextual interpretation of student experiences could be carried out, thereby facilitating enhancement of finding.

3.1. Study Area

The study was conducted in four Bangladeshi universities, both public and private, to develop diversity in opinions. Two public and two private universities were chosen. The public ones are University of Chittagong (CU), and Comilla University (CoU), and the private ones are Bangladesh Army University of Science and Technology (BAIUST), and Britannia University. They were chosen to represent variance in geographical setting, institutional ability, and students. Inclusion of public and private universities enabled comparison in different education environments and provided a broader picture of AI awareness and adoption within Bangladeshi university students.

3.2. Research Design and Observations

The study applied a mixed-method design, comprising a standardized survey and limited qualitative observation. The survey component generated quantitative data, whereas brief observations during campus visits provided qualitative data on students' technological interactions. In participant recruitment, a focus was placed on recruiting students from as many departments as possible within each university. This provided representation across diverse academic streams such as science, engineering, business, social sciences, and humanities to giving an enriched context to AI application and perception across different streams of education. These observations were used to complement quantitative information and shed light on the responses, reinforcing findings interpretation.

3.3. Sampling and Data Collection

The study targeted undergraduate students from mentioned universities. Stratified random sampling of balanced representation from different levels of academics and departments was employed. Data collection format was a dual approach method. CU surveys were fully conducted online using Google forms through email networks of students and Social Media networking. For Comilla University (CoU), BAIUST, and Britannia University, the data were collected using a mixed mode, combining online responses with on-campus survey sessions as well. Survey data obtained from over 200 undergraduate students across two private and two public universities. The combined mode of collection allowed for inclusivity, where participation with varying levels of digital access. The survey questionnaire included closed-ended questions and Likert-scale questions addressing frequency, purpose, and type of use of AI, perceived benefits, challenges, and ethical concerns. The instrument was validated through expert review and pilot test to determine clarity, reliability, and contextual relevance. All participation was voluntary, and responses were kept confidential.

3.4. Data Analysis

Data gathered were organized, coded, and analyzed using the help of Microsoft Excel. Analysis depended largely on descriptive statistics such as frequency distributions, percentages to summarize and describe key trends. Tabulation was used to illustrate patterns of AI usage and attitudes of students by university and discipline.

3.5. Limitations of the Study

Although the study aimed at obtaining a general overview of the adoption of AI in the higher education sector, there are certain limitations which should be taken into consideration. To start with, the research was restricted to six universities only and the conclusions might not be applicable in all the institutional variations in Bangladesh. However, to counter this limitation we attempted to encompass in the study the students in as many departments and disciplines as was possible along with sweeping representations that render the findings generalizable. Secondly, the research relied primarily on the results of self-report surveys that may have skewed the students. Lastly, time and resource limitations constituted restraining factors and so qualitative nature was limited to brief observation sessions rather than actual interviews or focus groups. The fact that all development of AI methods progresses rapidly implies that the attitudes of students might change over time, such that consequences represent the situation of the data gathering instance. Failure to do so with such constraints, this study provides a source that can be applied to describe the attitude and acceptance of AI among students in Bangladesh universities.

4. Results and Discussion

4.1. Research Results

This section outlines the appearance of the empirical research based on quantitative and qualitative data, thus providing the complete picture of the perception of ai among university students and their engagement with open-source ai tools. The analysis is given logically as follows: in the section, the demographic characteristics of the participants are presented first, age, gender, discipline, and type of institution, and then their ai usage patterns, which are the frequency of use, the purpose behind it, and experience with the ai technologies are discussed.

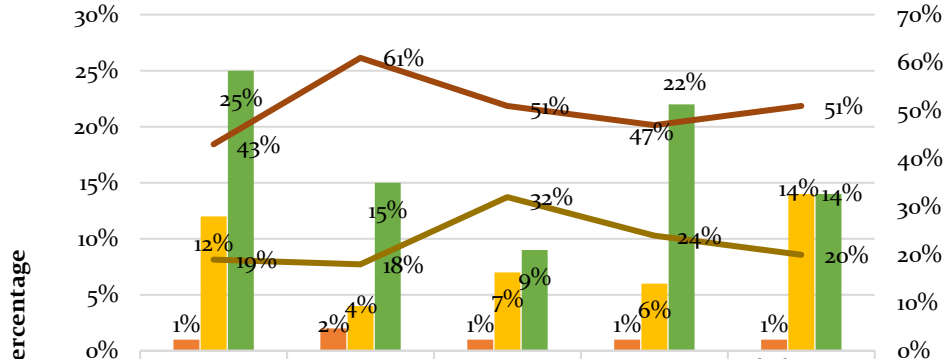
Table 1. Demographics Profile of the Respondents

Factor	Options	Frequency	Percentage
Gender	Male	186	62%
	Female	114	38%
Age	18–20	54	18%
	21-22	126	42%
	23-24	93	31%
	25-26	27	9%
Educational Level	Undergraduate	288	96%
	Graduate	12	4%
Department	CSE	60	20%
	LAW	36	12%
	BBA	132	44%
	Others	72	24%
Year of the Study	1st Year / 1st–2nd Semester	78	26%
	2nd Year	81	27%
	3rd Year	81	27%
	4th Year	54	18%
	Master's	6	2%

Formal Training	Yes	81	27%
	No	219	73%
Ownership of Personal Device	Yes	213	71%
	No	87	29%
Average Weekly Time Spent on AI Tools	Less than 1 hour	87	29%
	1-2 hours	129	43%
	3-5 hours	39	13%
	5+ hour	45	15%
Future Career Aspirations (select most relevant)	Academic Researcher	45	15%
	Teacher / Lecturer	39	13%
	Industry Professional	30	10%
	Entrepreneur	90	30%
	Others	54	18%
	Undecided	42	14%

Source: Author's Computation, 2025

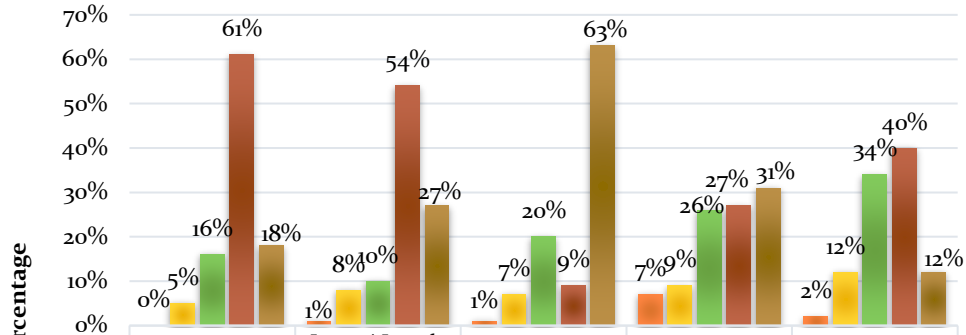
Table 1 shows the demographics profile of the respondents. The sample structure shows that most of the respondents are male, with 62% taking the largest percentage of the total population. The largest percentage is the 21-22 age groups (42%) of age. The majority of interviewees have received an undergraduate degree, which is 96%. Under departmental affiliation, the cohort of Business and Management Studies (BBA) is the highest number of 44% and the same percentage of second-year and third-year students, 27%, 27% displaying equal representation; fourth-year students represent 18%. There is a significant percentage in that a notable majority is untrained in the field, with 73%, but a significant percentage of individuals own personal devices, at 71%. When it comes to the use of AI tools, 43% of the respondents said they spend between one to two hours a week using them. Entrepreneurship is the most commonly chosen career after graduating, with 30% selected.



	I have a clear understanding of what Artificial Intelligence (AI) means in education.	AI improves the quality of teaching and learning.	AI tools help students understand difficult concepts better.	The use of AI makes learning more personalized and engaging.	I believe AI will be an essential part of higher education in Bangladesh in the near future.
Strongly Disagree (1)	1%	2%	1%	1%	1%
Disagree (2)	12%	4%	7%	6%	14%
Neutral (3)	25%	15%	9%	22%	14%
Agree (4)	43%	61%	51%	47%	51%
Strongly Agree (5)	19%	18%	32%	24%	20%

Figure 1. Perceptions and Awareness of AI among Respondents
Source: Author's Computation, 2025

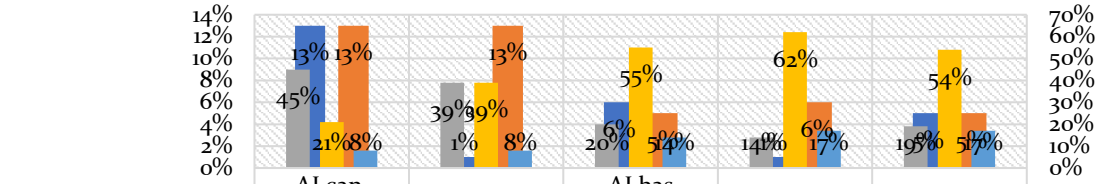
Figure 1 shows the perception & awareness of AI of the respondents. The generalist consensus rate represented by the data table literally upholds the assumption that artificial intelligence promotes instructional efficacy, with the highest agreement rate of 61%. A significant percentage of the respondents agree that AI will indeed form part and parcel of higher education in Bangladesh in the near future and score a 51% level of agreement. In line with this, a 51% vote will imply that participants consider AI tools as effective in assisting students to understand complex concepts. The idea that AI promotes a personalized and engaging experience of learning gained the biggest consensus of 47%. Finally, 43% of the participants confirm having a good conceptualization of artificial intelligence in the educational sphere. This information is consistent with the larger literature that describes AI in a rather positive sense and highlights that there is great evidence of its benefits to pedagogy in the industry.



	I am comfortable using AI tools in an educational setting.	I use AI tools most frequently for assignments, research, presentations, exam prep, coding, etc.	I use AI tools	I usually cross-check AI-generated content before using it in my academic work.	Without AI tools, I would find completing academic tasks more difficult.
Strongly Disagree (1)	0%	1%	1%	7%	2%
Disagree (2)	5%	8%	7%	9%	12%
Neutral (3)	16%	10%	20%	26%	34%
Agree (4)	61%	54%	9%	27%	40%
Strongly Agree (5)	18%	27%	63%	31%	12%

Figure 2. Usage Behavior and Adoption of AI among Respondents
Source: Author's Computation, 2025

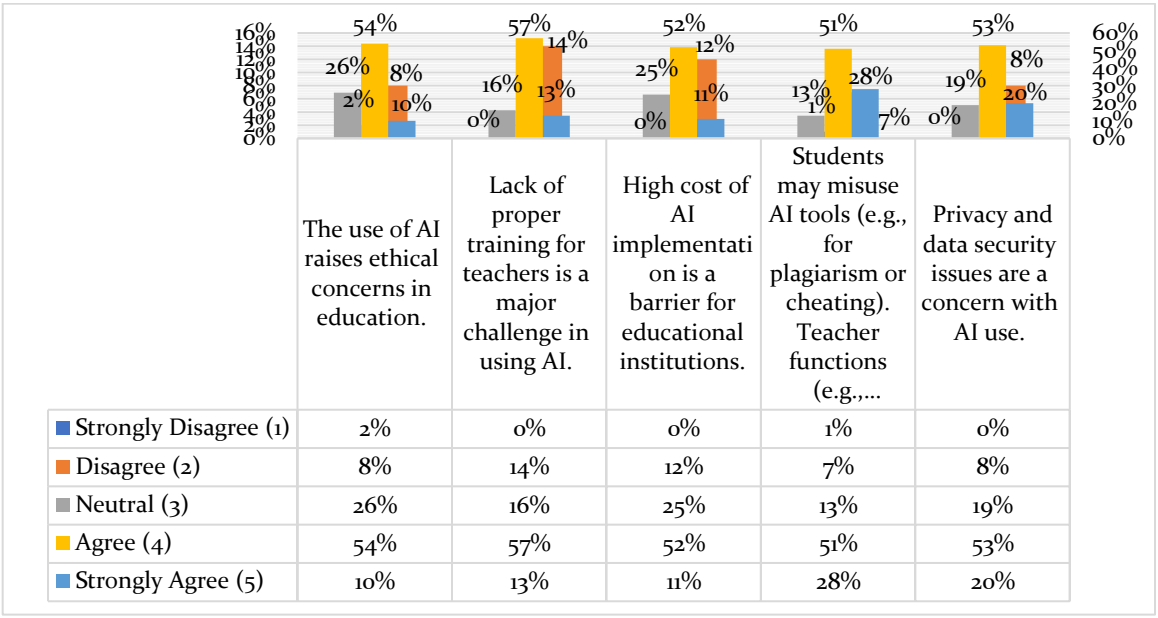
Figure 2 shows the usage behavior & adoption of AI of the respondents. The most conclusive data is a strong dependency on the AI tools, as the statement "I use AI tools" had an absolute majority of 63% in the Strongly Agree group. This strong adoption is further facilitated by a self-reported level of comfort with a reported statement of I am comfortable using AI tools in an educational environment, with an agreed score of 61% being its highest score. Its application is also focused on the practical activities, the most common use of AI tools on assignments, research, presentations, exam preparation, coding, and so on, which also obtained the maximum response of 54% Agree. Regardless of this high usage, some vigilance will still be necessary, as the statement I tend to cross-check AI-generated content before using it in my academic writing was at 31% Strongly Agree. Lastly, the sentence "In the absence of AI tools, I would consider doing academic work more challenging and got the highest response with 40%attesting to the need for these tools to do such academic tasks.



	AI can effectively replace some teachers' functions (e.g., grading).	AI can help identify students' learning gaps more effectively.	AI has improved my academic performance and learning outcomes.	AI supports my creativity by providing new perspectives and ideas.	AI increases student dependency and reduces critical thinking.
Strongly Disagree (1)	13%	1%	6%	1%	5%
Disagree (2)	13%	13%	5%	6%	5%
Neutral (3)	45%	39%	20%	14%	19%
Agree (4)	21%	39%	55%	62%	54%
Strongly Agree (5)	8%	8%	14%	17%	17%

Figure 3. Impact on Education and Skills among Respondents
Source: Author's Computation, 2025

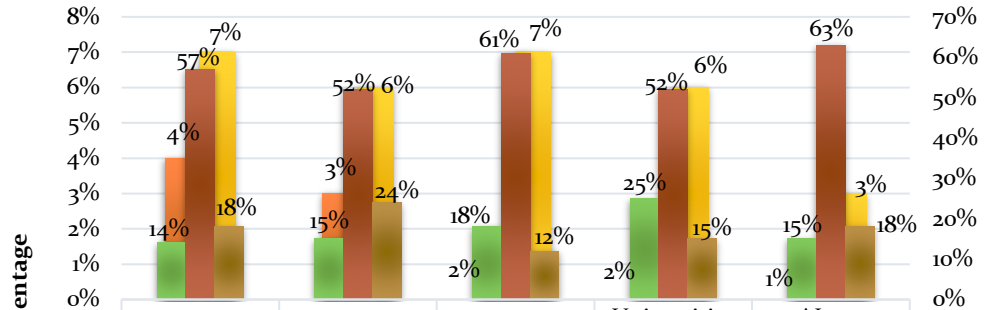
Figure 3 shows the impact on education & skills of the respondents. The most interesting finding as a scholar is the belief that artificial intelligence enhances my creative skills by providing new opinions and insights, as an Agree response rate of 62% reached a peak. Similarly, the fact that 55% of the survey respondents agree that AI has had a real impact on their academic results and performance supports the assertion. The intention that AI increases student dependency and impairs critical thinking received the most consensuses of 54%. Speaking about the relevance of AI in the substitutive functions, most of them are indifferent, as 45% of respondents themselves are not in support or opposition to the idea that AI can efficiently substitute some teaching functions. Lastly, the idea that AI will be more effective in identifying the learning gaps of students raises the most polarizing reaction with both the Neutral and Agree groups at 39% each.



	The use of AI raises ethical concerns in education.	Lack of proper training for teachers is a major challenge in using AI.	High cost of AI implementation is a barrier for educational institutions.	Students may misuse AI tools (e.g., for plagiarism or cheating). Teacher functions (e.g.,...	Privacy and data security issues are a concern with AI use.
Strongly Disagree (1)	2%	0%	0%	1%	0%
Disagree (2)	8%	14%	12%	7%	8%
Neutral (3)	26%	16%	25%	13%	19%
Agree (4)	54%	57%	52%	51%	53%
Strongly Agree (5)	10%	13%	11%	28%	20%

Figure 4. Challenges, Ethics, and Risks among Respondents
Source: Author's Computation (2025)

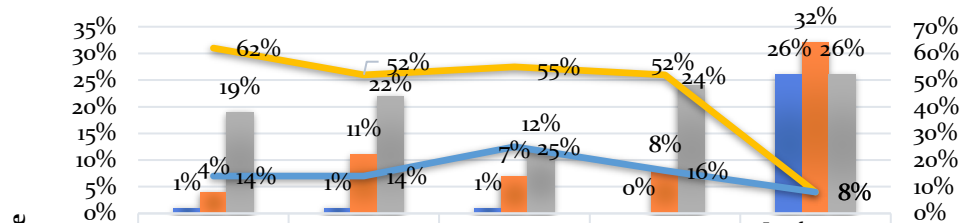
Figure 4 shows the challenges, ethics & risks of the respondents. The most crucial message content that was raised throughout the corpus is a statement that the lack of professional growth of teachers is a key barrier to the successful implementation of artificial intelligence; the statement had the greatest concordance rate of 57%. At the same time, there is considerable concern about the ethical implications spawned by the introduction of AI into the pedagogy process, where 54% of the interviewees indicated that they agreed. Anxieties of privacy and data security also prevail in the discussion, with a large majority of 53% agreeing to the statement as followed quickly by the economic issue of AI implementation, recording a 52% agreement. A possible misappropriation of AI resources by students is another topical question, and its possibility is given a 51% consensus. This ongoing trend denotes that the academic community perceives training, ethics, cost, and security as the most important barriers to the successful adoption of artificial intelligence.



	Students should be trained to use AI tools responsibly.	Teachers need proper training to use AI tools effectively.	AI can enhance personalized learning pathways for students.	Universities should provide access to AI tools for all students equally.	AI can support academic research by providing relevant data quickly.
Strongly Disagree (1)	4%	3%	2%	2%	1%
Disagree (2)	7%	6%	7%	6%	3%
Neutral (3)	14%	15%	18%	25%	15%
Agree (4)	57%	52%	61%	52%	63%
Strongly Agree (5)	18%	24%	12%	15%	18%

Figure 5. Strategies for Academic Innovation among Respondents
Source: Author's Computation, 2025

Figure 5 shows the strategies for academic innovation of the respondents. The strongest concordance in the whole body of data is recorded with the statement that artificial intelligence can amplify scholarly exploration by providing relevant data on time, as attested by the Agree response that has the highest zenith of 63%. This is just before the belief that AI can supplement personalized student learning paths, where they Agree marker also prevails at 61%. Of the other three statements, the preponderant response is still agreed, with 57% of statements that are imperative in nature (that students be trained to use AI tools responsibly) and 52% of statements that are imperative and mandatory that teachers undergo training to use AI tools effectively, and imperative and mandatory that all groups of students gain equitable access to AI tools. This regular pattern is evidence of an institutional agreement of overwhelming belief that the goodness of AI and the integration of AI necessitate immediate strategic interventions that focus on training, access, and academic support.



	There is insufficient policy or guidance on how to use AI in education.	Universities should integrate AI literacy into the curriculum.	Clear policies are needed to prevent plagiarism and misuse of AI tools.	Universities should ensure equitable access to AI tools for all students.	In the next five years, AI will significantly transform higher education in Bangladesh.
Strongly Disagree (1)	1%	1%	1%	0%	26%
Disagree (2)	4%	11%	7%	8%	32%
Neutral (3)	19%	22%	12%	24%	26%
Agree (4)	62%	52%	55%	52%	8%
Strongly Agree (5)	14%	14%	25%	16%	8%

Figure 6. Policy, Training, and Future Outlook among Respondents
Source: Author's Computation (2025)

Figure 6 shows about the policy, training & future outlook. The strongest agreement that is observed in the tabulated data refers to the urgency of clearer policy frameworks and guidelines in terms of artificial intelligence, as it can be seen that the largest percentage of respondents agree with three of the five different statements. Specifically, 62% of respondents confirm the lack of developed policy or guidelines in AI implementation in the learning setting. The support of proactive policies towards institutions in future-proofing is also high, with 55% of the respondents holding the view that clear policies are necessary in reducing the cases of plagiarism and misappropriation of AI-powered tools. Furthermore, they are 52% convinced that universities must include AI literacy into their programs, and they should commit to making AI accessible equally to all students. The only field of significant lack of consensus is the projection of the transformative effects of AI on higher education in Bangladesh within the next five years, where 32% of the participants respond in that direction.

4.2. Discussion

This research clarifies significant information regarding the implementation of Generative Artificial Intelligence (AI) in Bangladeshi higher education, and it starts with the description of the respondent group and the existing digital environment. The sample mainly consists of male (62%), most of the respondents belong to undergraduates, and the majority of them were 21-22 (42%) years old. Students representing Business and Management Studies (BBA) form the greatest departmental cohort at 44%. Although the predominant percentage of 73 does not have formal training in AI, there is a high level of ownership of personal devices (71%), and this indicates a background of self-directed learning that now defines the interaction with AI.

The average use cycle is moderate, with 43% of students spending between two and three hours weekly using AI resources, highlighting that it is more of an aid, as opposed to a major use of academic time. The attitude of students to AI is significantly positive and practical, considering it as a helpful pedagogical tool. A high agreement that AI is increasing the efficacy of instruction (61%), and it will be a part and parcel of higher education in Bangladesh (51% consensus). This optimistic perspective is also

supported by the belief that AI successfully helps students to understand complicated phenomena (51%) and facilitates the personalized and engaging process of learning (47%). These beliefs are directly converted to the usage patterns, which imply that AI is a deep-seated academic practice. A majority (63%) is adamant in their use of AI tools, with 61% stating that they are highly comfortable using AI tools. The application of AI is largely focused on key academic activities, including homework, research, and exam preparation, as 54% of responses support this observation. Though the level of adoption is high, there is a noticeable level of source-critical awareness, with 31% describing their cross-checking activities to the AI-generated contents as strongly affirmative, although 40% of them described the level of academic work as being more challenging without the tools.

In academic terms of the context, the impact of artificial intelligence on the competencies of learners seems to be mostly positive. The respondents (62% strong) accepted the idea that AI enhances creative abilities as a result of providing new perspectives and ideas. On the same note, 55% said that AI has resulted in tangible academic outcomes and performance improvement. However, this optimism is checked by substantive concerns, the greatest of which is that 54% agree that AI will encourage a problem of too much student dependency and the loss of critical thinking. At a larger institutional level, the academic community cites some important barriers, the most notable of which is the paucity of professional development prospects to educators, with 57% of the respondents agreeing that this is the most common barrier. Ethical and practical issues also take a significant burden, with 54%, 53%, and 52% of respondents concerned about ethical consequences, privacy and data security, and the economic cost of disproportionate expenses, respectively.

To solve these challenges, the data highlights a strong need for a swift institutional change and a clear action strategy. Such a dominant policy implication arises because of a 62% agreement that there is no substantive policy or guideline that regulates the deployment of AI at present. The students strongly support the idea that AI can make an important contribution to the academic investigation (63% agreement) and contribute to the personalization of learning routes (61% agreement), which will define the future picture of integration. To facilitate the attainment of this vision, it necessitates formulated demands: the students must get trained in the responsible use of AI tools (57%), among others, teacher training is required (52%), and provision of AI resources should be distributed equally to all student groups (52%). Combined, these results point to the idea that despite the overall popularity of AI use and the unquestionable benefits, the successful and fair implementation of AI into the higher educational system of Bangladesh depends on the timely development of policies, comprehensive training opportunities, and actions to prevent the two vices of digital inequity and academic dishonesty.

5. Conclusion

The integration of generative AI into Bangladesh's higher education system represents a paradigm shift, offering students unprecedented tools for creativity, research, and problem-solving. This study confirms that Generation Z learners are prolific adopters of technologies like ChatGPT, using them to enhance comprehension, efficiency, and output, while also exercising critical oversight by verifying AI-generated information. However, significant systemic challenges threaten equitable and effective adoption. A pronounced digital divide leaves many students without personal devices, while a widespread lack of formal AI training underscores the urgent need for structured educational programs. Furthermore, the absence of clear institutional guidelines and insufficient teacher training hinders responsible implementation.

To harness AI's potential while mitigating risks like over-dependence, Bangladeshi universities must act decisively. This requires integrating AI literacy into curricula, providing comprehensive

training for both students and faculty, and ensuring equitable access to open-source platforms. Ultimately, the success of this technological integration hinges on timely, inclusive policies and sustained support. By fostering an ecosystem of informed guidance and ethical practice, institutions can empower students to navigate AI-enhanced learning landscapes, strengthening their critical thinking, innovation, and academic integrity.

6. References

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