

## ATTITUDE AND DIGITAL COMPETENCE: A SOCIOLOGICAL EXPLORATION INTO FIRST-YEAR UNIVERSITY STUDENTS' LIVED EXPERIENCE OF USING GENERATIVE AI

Sama Shah<sup>\*1</sup>, Amber Ferdoos<sup>2</sup>

<sup>\*1</sup>PhD Scholar, Department of Sociology, International Islamic University, Islamabad

<sup>2</sup>Assistant Professor, Department of Sociology, International Islamic University, Islamabad

<sup>1</sup>samashah001@gmail.com, <sup>2</sup>amber.ferdoos@iiu.edu.pk

DOI: <https://doi.org/10.5281/zenodo.17946936>

### Keywords

Generative AI; First-year university students; Digital competence; Attitudes toward AI; Higher education; Pakistan; Bourdieu's Theory of Practice; Phenomenological study

### Article History

Received: 15 October 2025

Accepted: 28 November 2025

Published: 16 December 2025

Copyright @Author

Corresponding Author: \*

Sama Shah

### Abstract

This qualitative research paper investigates the experiences and negotiation of first-year university students in Pakistan on the use of generative artificial intelligence (GenAI) tools to learn, with a specific emphasis on attitude and digital competence. Under the guidance of an interpretivist, phenomenological design and Theory of Practice (habitus, capital, field) by Bourdieu, semi-structured interviews with six first-year students with a variety of disciplinary, linguistic, and socio-economic backgrounds and reporting at least one tangible experience of using (or avoiding) the use of GenAI in their coursework were held. Reflexive thematic analysis reveals that students largely cast GenAI as an apolitical, in essence, private tutor that aids them in handling challenging ideas and academic English, and, at the same time, creates ethical barriers around authorship and originality. Lack of access to devices, connectivity and digital capabilities lead to varying levels of depth and sophistication of use, with highly digital-capital students utilizing GenAI to perform more nuanced tasks and lower-capital students stuck on simple explanations. Attitudes toward GenAI are ambivalent, combining feelings of empowerment and inclusion with anxiety about dependency, cultural bias, and erosion of critical thinking. In the context of unclear institutional policies, students rely on hidden, peer-led practices yet consistently call for structured, discipline-sensitive AI literacy and explicit guidance. The study argues that early, inclusive AI literacy interventions are essential to ensure that GenAI support rather than exacerbate existing inequalities in higher education.

**Introduction**

Generative artificial intelligence (GenAI) is quickly becoming part of everyday academic life, now changing the process of search, reading, writing, and learning of students in their higher education (Hadinejad, 2024). However, developing studies show that the general view of GenAI depends both on attitude and perceived learning value, and these orientations determine the inclination of the students to incorporate the tools into their everyday study practices (Megbowon, 2025). Research based on the sociological theory indicates that disproportionality in cultural, social, and technological competence influences change in utilisation, performance, and trust in GenAI among groups of students (Tang, 2025). Authorship, originality, and limits of acceptable assistance are also cited by students and teachers in foundation writing and other gateway courses (Kell, 2025). The fear of the mediating role of GenAI in human interaction and the development of core skills, including critical thinking, collaboration, and evaluative judgment, has been emerging in campus discussions (Salguero, 2024). The group of pre-service teachers and other first-year students shows uncertain preparation, indicating the gaps in operational, informational, and ethical aspects of digital competence (Tsankov & Damyanov, 2024). The concept of regions and culture also unveils the influence of the societal discourse of automation and AI on student expectations and fears in the new academic disciplines (Beldean, 2024). On campus, students describe both benefits and dangers in the promises of GenAI of access, productivity, and equity, and emphasise the significance of transparent, skill-building, ethically-grounded guidance (Kapur, Sharkey, and Ren, 2025). Similar dynamics apply to faculty where instructors can bargain over the support of productive experimentation without jeopardising the learning goals and assessment integrity (Driggers, 2025). This paper takes a clear qualitative approach to understand first-year students' experiences and meanings when they use AI for learning. The study will use simple, detailed interviews to capture how students try to get accurate and useful information from AI and how their background influences that process.

**Problem Statement**

Although GenAI is becoming increasingly adopted, an acute gap in knowledge about how first-year college students perceive and bargain these tools in their daily studies, especially in the relationship between attitude and digital competence that organizes the real practices and results (Tang, 2025). Ethical indeterminacies, lack of preparedness, and unclear instructional conventions are recorded in the literature, but seldom focus on the lived experiences of newcomers in the process of establishing foundational study practices and identities as students (Hadinejad, 2024). Furthermore, they lack a sociological explanation of these early experiences; thus, there is a danger of the institutions enforcing policies as well as other supports, which unintentionally prolong imbalance in access, trust and success in this initial path into higher education (Megbowon, 2025).

**Research Question**

How do first-year university students' attitudes and digital competences shape their lived experiences, adoption patterns, depth of use, and perceived learning value of generative AI in everyday academic tasks?

**Significance**

This paper adds to the ever-expanding discussion on the topic of generative AI transforming early university education by offering a sociologically informed, first-year-specific view of the matter in Pakistan, a group of people and a region largely lacking in literature. Through the study of the lived experience of the students based on the Theory of Practice, by Bourdieu, it becomes possible to understand how differences in habitus, digital capital, and institutional norms would influence not only the value of AI use but also its perceived risks, importance, and ethical limits. The results can be used by the universities that are interested in designing equitable, culturally sensitive AI literacy programs that can promote responsible adoption instead of reinforcing the existing disparities in terms of access, confidence, and academic readiness. By so doing, the study helps in the development of policies, the design of curricula, and the first-year support mechanisms at a crucial time, as AI is rapidly changing educational practices.

### Literature Review

Early research on first-year transition emphasized how perceptions, expectations, and foundational academic competencies shape learning success and retention. Classic studies documented the importance of academic and social integration (Tinto, 1994; Yorke & Longden, 2008) and identified frequent mismatches between first-year students' expectations and academic reality (Smith & Wertlieb, 2005). Later research highlighted that a significant portion of first-year students come to the university without knowing what to expect and being unprepared in academics (McCarthy & Kuh, 2006; Mah & Ifenthaler, 2017). In this stream, the degree completion and retention were associated with such general academic competencies as time management, learning skills, self-monitoring, technology proficiency, and research skills (Barrie, 2007; Mah & Ifenthaler, 2017; Thomas, 2002; Crisp et al., 2009). This background places current questions on digital competence with AI as an extension of issues that have troubled first-year preparedness for a long time.

With the introduction of AI into the educational context, researchers expected students to need to acquire new and emerging digital skills to use AI applications in various fields, such as higher education (Seufert & Tarantini, 2022; Ouyang et al., 2022; Popenici & Kerr, 2017). Institutional and classroom AI was projected to influence tutoring, assessment, content creation, and analytics, as well as to trigger policy, ethics, and competence framework development at the same time (Azevedo et al., 2022; Brusilovsky, 2023; Heil & Ifenthaler, 2023; Vuorikari et al., 2022; Jobin et al., 2019). Against this backdrop, recent evidence suggests that first-year students' generic academic skills may be comparatively well established, but their AI-related competencies are limited (Ng et al., 2023). Importantly, research has not yet produced conceptual frameworks specifically addressing first-year students' use of human-like AI in higher education, indicating a pressing gap (Delcker et al., 2024). Responding to this, recent work has begun to conceptualise AI-tool functionalities for higher education to study intent, frequency of use, and potential influencing factors, laying groundwork for

targeted competence development and implementation strategies (Delcker et al., 2024). The late-2022 introduction of ChatGPT accelerated AI's pedagogical relevance by enabling real-time, open-ended generation of text, code, and explanations, distinct from earlier, more constrained AI systems (Black & Tomlinson, 2025). Early adoption studies in 2023 provide a snapshot of how undergraduates employ AI when it is explicitly permitted in coursework. In a large General Education course, students reported using AI for higher-order tasks (e.g., understanding complex topics, finding evidence) as well as lower-order tasks (e.g., revising, editing, proofreading), often to improve the communication of their own ideas (Black & Tomlinson, 2025). It is also important to note that a significant number of students were sceptical about AI products and insisted on intellectual autonomy, drawing the line between reasonable AI support and the necessity of creative thinking (Black & Tomlinson, 2025). Such judgment helps to agree with the results. Students appreciate autonomy and interaction when using AI and select AI feedback to complete specific tasks, at the same time deciding when to use AI and when to work independently (Wambsganss et al., Escalante et al.; Black & Tomlinson, 2025).

The evidence that is emerging indicates that students are increasingly using AI as an independent research and information-finding tool and that AI is utilised to locate academic sources, absorb complex information, fact-check, and filter-find relevance behaviours that can be interpreted as pointing towards a more autonomous inquiry type, should the student be supported with relevant competencies (Black & Tomlinson, 2025). However, these trends do not emerge without tensions: structured AI systems could be limiting deeper interaction, and open-ended applications may allow students to understand the concepts in question, provided that they are competent enough to critically evaluate AI outputs and integrate them (Banihashem et al.; Wambsganss et al.). The sociocultural perspective also redefines AI as an intermediary agent, a more knowledgeable other, to expand the abilities of students in the zone of proximal development and allow them to interact with tools collaboratively, as opposed to being dependent on text generation (Black & Tomlinson, 2025). This framing assists in the

articulation of how attitudes (scepticism, autonomy-seeking, and discernment) intersect with digital competence as a driver of the lived experience of the first-year students with regard to generative AI.

At the same time, typologies of mindful (human-like) and mindless (machine-like) AI explain the growing variety of tool characteristics that students have to work with (Dang Liu, 2022). With the evidence that AI competencies of the first-year students are lower compared to general academic skills (Ng et al., 2023), the need for AI literacy programs is becoming more accessible and flexible and should incorporate practical skills and knowledge of AI and reflective attitudes (Delcker et al., 2024). Longitudinal and design-oriented research is needed to link AI competencies and pedagogical approaches to learning outcomes and to tailor support across diverse prior knowledge profiles (Delcker et al., 2024). In sum, the literature has progressed from broad concerns about first-year preparedness to targeted questions about AI-specific competence and attitude. While early adoption studies reveal nuanced, autonomous, and often skeptical student engagement with generative AI, the lack of first-year-focused frameworks and the documented gaps in AI competence highlight an urgent agenda: to conceptualize, cultivate, and study first-year students' digital competence and dispositions for responsible, independent, and effective use of generative AI in higher education (Delcker et al., 2024; Black & Tomlinson, 2025).

### Methodology

#### Research Design

This study is situated within an interpretivist research paradigm, which assumes that social reality is multiple, subjective, and co-constructed through human meaning-making. Under this paradigm, the aim is not to produce generalisable findings but to generate rich, contextualised understandings of how first-year university students experience and make sense of generative AI in their academic lives.

The research is based on phenomenology philosophically and especially on hermeneutic/interpretive phenomenology (Heidegger, Gadamer, van Manen). This orientation regards lived experience as being inseparable from social, cultural, and technological situations in which people are

entangled. It focuses more on interpretation and not pure description, because it coincides with the interests of the study on the role of attitudes, dispositions, and digital competencies in influencing the interactions that students have with generative AI.

The investigation is based on this philosophical basis, and it is a qualitative, phenomenological research design. Its methodological purpose is to learn the nature and variability of the lived experiences of students with generative AI, and not gauge its use or forecast behaviour. In-depth interviews are semi structured and used to entice the participants to share actual experiences, thoughts, and senses.

An approach to sampling strategy was a purposive, maximum-variation sample to represent different combinations of language background, past schooling, digital access and disciplinary context. This has been in line with phenomenology that places an emphasis on experiencing the phenomenon through various perspectives, as well as the interpretivism that focuses on the meaning of various habitats and capitals. The interviews were conducted until thematic and interpretive saturation (when no new conceptualizations were reflected but only a certain number of participants were identified), was predictable to occur at 5 to 10 participants but pathologically defined.

#### Data Collection

The data was produced by 30-45 minutes semi-structured interviews, which were held through a safe video connection or in person. The reason why semi-structured interviewing was chosen is that it is not too structured and at the same time it is not too casual to be able to conduct the phenomenological exploration. The format will allow the participants to describe their experiences in their language and the researcher to seek the emergent meanings.

The interview guide contained questions that discussed:

- academic experiences of generative AI,
- positions and orientations towards AI,
- perceived value or concern of learning,
- digital abilities and limitations,
- refusal to use AI where possible.

Informed consent was given by all the participants, and the interviews were audio-

taped and transcribed verbatim in order to facilitate rigorous phenomenological analysis.

### **Data Analysis**

Reflexive thematic data analysis based on a hermeneutic phenomenological lens that puts emphasis on the interpretation and shared meaning construction between the researcher and the participant were used to analyse the data. After the transcription, the researcher did several immersive readings on each interview, to get a holistic feel of what the participants lived. Inductive coding involved the creation of open and descriptive codes and then increasingly more interpretive codes which pursued how the attitudes and digital competencies and contextual influences influenced the engagements of the participants with generative AI. The codes were repeatedly compared and grouped into initial themes that were then narrowed down to laconic parts (individual excerpts) in relation to the entire (the entire narratives) according to phenomenological hermeneutics. Reflexive memoing aided in continuing interpretation, explaining assumptions, and focused on the position of the researcher. Conceptual coherence and interpretive depth were used as the basis of developing the themes instead of frequency to ensure that each theme represented a vital attribute of the phenomenon and that the differences among students were adequately represented. This was a recursive and adaptable analytic process in which insights were replicable over time as more was learned and eventually generated a rich, interpretative narrative of the lived experiences of the first-year students in relation to their experience using generative AI to complete academic assignments.

### **Bourdieu's Theory of Practice**

The paper is rooted in the Theory of Practice by Bourdieu that offers a logical approach to the process of learning the way the background of first-year university students influences their actual experiences of applying generative AI to academic assignments. The research question, which is how the attitude of students and digital competencies affect their experiences, adoption behavior, and extent and perceived learning value of generative AI, is inherently a socially-oriented question that needs more than an explanation of individual

behaviour. Bourdieu and his conceptual triad of habitus, capital and field provides the framework to explain these experiences: the habitus of students shapes their attitudes and study practices, their different types of capital in combination with digital capital determine their competence and access, and the field of the university (with its norms, rules, and expectations) defines what they perceive as legitimate or valuable uses of AI. Through this means, the theory can be directly applied to support the main question, as it implies that the use of AI is not only a technical choice of students but a socially constructed behavior based on pre-existing dispositions, unequal resources, and institutional environments.

In this theoretical context, habitus is perceived as the stable practices that students carry over with them by way of their past education and family systems that affect their attitude toward, perceptions and treatment of generative AI. The student used to studying independently using the text might be cautious about AI, and the student used to collaborative or exploration learning might be able to experiment easier. The conceptualization of capital is very liberal such that capital is viewed as economic, cultural, social and digital capital with a special focus on digital capital which consists of quality of devices, access to the internet, digital literacy and peer-supportive networks. Such resources define the capacity of students to not only use AI tools but also to be able to use them critically and effectively. Field describes the organized environment of the university, such as its evaluation standards, disciplinary standards, academic honesty regulations and organizational communication regarding responsible AI use. It is the approach to AI, based on these field expectations that students make sense of AI, to evaluate what is considered a proper, risky, or legitimate use of AI in their program or discipline.

The theory by Bourdieu thus directs collection and analysis of data. Interview questions and contemporary diaries were crafted to generate the narratives that depict the dispositions of students, their access to digital extension, the supervision of peers and teachers, and their perception of the institutional conventions. In the process of analysis, the researcher considered habitus, capital and field as sensitizing concepts and coded them according to study routines of

the students, past experiences of education, access to digital devices, literacy, peer influence and perception of assessment regulations. Nevertheless, the analysis was open to emergent themes, which are in line with reflexive thematic analysis and hermeneutic phenomenology. The analysis of comparable cases enabled the researcher to investigate the depth and quality of AI use in relation to various configurations of habitus and capital, like situations when strong digital capital and a conservative study habitus presupposed a more cautious engagement, or that in which high peer social capital enabled prompting skills to be acquired in a very short amount of time. In this perspective, the use of

generative AI can be explained as a socialized process and not just a technical ability.

Resting the research on the Theory of Practice by Bourdieu, the study can no longer base itself on descriptions of what students are already doing with AI but explain the reasons as to why these differences exist and how they are the result of the interactions between background dispositions, availability of resources and institutional arrangements. The given theoretical stance eventually makes the study stronger as it sheds light on the social processes that influence the experiences of first-year students and offers guidance on how to interpret the shared stories with regard to the research question.

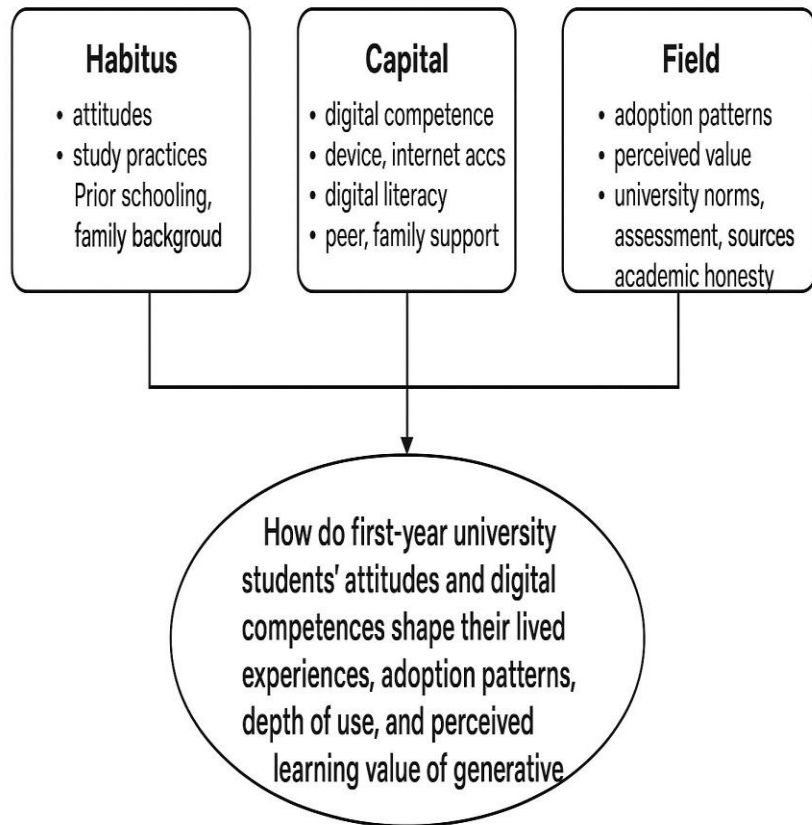


Figure 1: Conceptual Model Table 1:

Participant Information

Participants	Age	Gender	Degree	University	Semester/year	Main Purposes for Using AI in Academics
1	18	Female	B.S Education	International Islamic University, Islamabad	1st Semester	To understand difficult concepts (e.g., constructivism, assessment), get simple explanations, examples, and sentence starters for assignments.
2	19	Male	BS Computer Science	International Islamic University, Islamabad	1st Semester	To clarify programming concepts, debug and improve code, compare solutions, brainstorm project ideas.
3	20	Female	BS English	International Islamic University, Islamabad	1st Semester	To simplify dense readings (linguistics, theory), summarise articles, check clarity and structure in essays, get ideas for arguments.

4	18	Male	BBA – Business Administra tion	International Islamic University, Islamabad	1st Semester	To understand basic business and maths concepts (market segmentation, interest), get Pakistani examples, support simple written answers.
5	19	Female	BS Psychology	International Islamic University, Islamabad	1st Semester	To clarify psychological theories (conditioning, correlation), get simple examples, summarise abstracts, and check grammar.
6	21	Female	BS Sociology	International Islamic University, Islamabad	1st Semester	To understand sociological concepts (stratification, bureaucracy), get Pakistani-context examples, and bridge English academic language.

Table 2: Main Themes with Participant Responses

Code No.	Main Theme	Participants	Answer (What They Said)
1	AI as Private Tutor and Language Bridge	1, 2, 3, 4, 5, 6	Respondent 1: 'I typed, 'Explain constructivist learning in easy words with examples for Pakistani classrooms.' It gave me a clear explanation... After reading that, I wrote my own paragraph.' Respondent 3: "The textbook language was dense... I wrote: 'Explain basic phonetics terms with very simple examples for Pakistani students.' It was much easier than reading just the textbook."
2	Ethical Boundaries, Authorship, and Fear of Dependency	1, 2, 3, 5, 6	Respondent 1: "I did not use it for my reflective journal about my first week at university, because that is my feeling. It would feel like cheating." Respondent 2: "If I let it write whole code blocks for me, I might skip the struggle where real learning happens." Respondent 5: "We had to write a self-reflection about our own personality traits... I didn't use AI for that. It doesn't know my life, my culture, my context."
3	Digital Capital and Competence Shaping AI Use	1, 2, 4, 6	Respondent 1: "I use my phone data only, no laptop... Writing a good prompt is hard... when I type a short question, the answer is not what I want." Respondent 4: "Typing in English is slow, and I make spelling mistakes. Sometimes AI doesn't fully understand what I'm trying to say." Respondent 2 (contrast): "Technically, it's very easy for me... I experiment with prompts... I also use it to review my own code: 'Find potential errors.'"
4	Institutional Silence, Hidden Use, and Demand for AI Literacy	1, 2, 3, 4, 5, 6	Respondent 2: "Some teachers are okay with it as a tutor; others warn us strongly. That mixed messaging makes me feel a bit tense... I don't want to cross a line unintentionally." Respondent 4: "I would like the university to have special sessions... where they teach us basic digital skills plus how to use AI... Not just telling us 'don't copy.'" Respondent 6: "A supportive workshop, maybe conducted in Urdu and English, would help us catch up."

### Data Analysis

A thematic analysis of the interview data generated from six first-year university students in Pakistan who reported using (or deliberately avoiding) generative AI tools such as ChatGPT in their studies. Drawing on an interpretivist, phenomenological orientation and Bourdieu's Theory of Practice (habitus, capital, field), the analysis explores how students describe their lived experiences, how their attitudes shape adoption and depth of use, and how digital competence enables or constrains their practices. The themes are discussed in relation to the literature reviewed earlier in paper.

#### AI as Private Tutor and Language Bridge

Across interviews, generative AI was consistently framed as a non-judgmental, on-demand tutor that helps students navigate unfamiliar concepts, dense academic English, and new disciplinary expectations. This finding resonates with early adoption studies that position

generative AI as a mediating tool supporting both lower- and higher-order learning tasks when used with some degree of critical agency (Black & Tomlinson, 2025).

Some of the respondents reported using AI mostly to comprehend but not to create academic content. Respondent 1 is a first-year education student in an Urdu-medium government school and described her first encounter with AI when doing a Foundations of Education assignment:

"I wrote my question in the app: 'Explain inclusive classroom in simple words.' It gave me a clear explanation with examples... After reading that, I wrote my own paragraph in my notebook using my own words."

In this case, AI is used as a conceptual scaffold, a means of pivoting abstract pedagogical terminology down into a language and familiar examples. In a course in linguistics, respondent three also tried to use AI as a prelude to challenging material:

"The textbook language was dense... I wrote: 'Explain basic phonetics terms with very simple examples for Pakistani students.' It gave a list of terms with everyday examples... it was much easier than reading just the textbook."

This narration reminds the literature that predicts the emergence of new types of digital

competence concerning AI, especially the capacity to reconcile AI descriptions to personal learning requirements (Delcker et al., 2024; Seufert & Tarantini, 2022). They also reflect the results that students appreciate AI as a clarification, summarisation and alternative explanations tool instead of making direct copies of final results (Black & Tomlinson, 2025).

More importantly, AI compensated those students who experienced an academic or linguistic periphery. Respondent 1 clearly related AI to her disadvantage, as a student speaking Urdu:

"For a girl like me, from a government school, sometimes I feel behind compared to English-medium students... AI gives me a basic understanding, then I can handle the book."

As Bourdieu defines it, AI is a kind of temporary substitute for cultural and linguistic capital that is perceived to be lacking in students, who apparently feel inferior to their previous education. It is a navigational method of the university environment, where academic fluency and exposure to abstract theoretical speech are the normative advantages of the field (Barrie, 2007; Mah&d Ifenthaler, 2017).

In the same way, Respondent 4, who has a rural background and has been exposed to business concepts very little, described AI as creating a bridge into the unknown language of discipline: "My school had no proper career counselling, no business subjects... When I see terms like 'value proposition' or 'customer retention', I get scared. AI can quickly explain them in everyday language and sometimes even in Urdu if I ask."

This pattern aligns with work suggesting that generative AI may offer *potential* for equity by supporting comprehension and access, especially for first-generation and underprepared students (Hadinejad, 2024; Kapur, Sharkey, & Ren, 2025). At the same time, as later themes show, this potential is constrained by differences in digital capital and institutional support.

Ethical Boundaries, Authorship, and Fear of Dependency

A second strong theme concerns how students *morally and practically* negotiate the boundaries

between legitimate assistance and academic misconduct. Without clear institutional policies, participants engage in what Kell (2025) describes as “bargaining” around authorship and originality in foundation-level writing.

Across interviews, students drew relatively consistent **ethical boundaries**: generative AI was acceptable for understanding concepts, checking clarity, or generating ideas; it was inappropriate for tasks that required personal reflection, original thinking, or where instructors had explicitly forbidden AI. Respondent 1 summarised this distinction:

“I used it for understanding ‘formative assessment’... I did not use it for my reflective journal about my first week at university, because that is my feeling. It would feel like cheating.”

Respondent 5, a first-year psychology student, articulated a similar line:

“We had to write a self-reflection about our own personality traits. That felt personal... I did not use AI for that. It does not know my life, my culture, my context.”

These examples point out that first-year students are hardly naively welcoming AI into their lives as a universal remedy; they are busy building the areas of legitimate and illegitimate assistance.

This confirms the fact that Black and Tomlinson (2025) note that a substantial number of students have what they call intellectual independence, and they establish their own parameters of what is considered acceptable AI intervention and original thinking. It is also indicative of anxieties in the literature regarding authorship and boundaries of permissible AI mediation of gateway courses (Kell, 2025).

Another common practice was reading AI and closing it, and writing independently was found among respondents. This is explained by respondent 2 in respect to programming:

“I did not just copy its code. I rewrote my own version and modified it for a different problem... In the next quiz, there was a recursion question, and I solved it without AI, which felt like a win.”

Respondent 4 explained a similar decision when tempted to copy a paragraph:

“I once asked it to ‘write a short paragraph’... The paragraph looked good, and I was tempted to submit it as is. Then

I thought, ‘If I submit this, have I really learned anything?’ So I rewrote it in my own style.”

Such accounts reveal how students are trying to hold on to embodied competence (habitus), internal standards of diligence and equality, despite the lack of clear institutional instructions. However, they also observe the fragility of such boundaries, where the convenience and fluidity of AI productions are also evident in Salguero (2024) when he projects the feeling of the destruction of core competencies by the AI in a blind manner.

Digital Capital and Competence Shaping AI Use

The third theme is how the differences in devices, connectivity differences, past schooling, and digital skills influence the quality and magnitude of AI use. The gap in digital competencies among pre-service teachers, as well as the first-year cohort, in general, has already been reported in the literature (Tsankov Damyanov, 2024; Ng et al., 2023), but the given study shows how the deficiency in digital competencies contributes to the organisation of AI practices in a more specific way.

The participants were also not mixed at the economic and digital capital level. Respondent 2 is a computer science student in a private university, who speaks English, has a laptop, fast Wi-Fi, and has good prior experience with IT:

“Technically, it is very easy for me... I experiment with prompts like ‘explain my mistakes’ or ‘highlight grammar errors only’... I also use it to review my own code: ‘Find potential edge cases.’”

On the contrary, Respondent 1 had a low-end smartphone and mobile data only, and Respondent 4 considered campus labs, as he did not have a personal laptop. In their case, the problem of basic access and slow typing was quite common. As Respondent 4 put it:

“Typing in English is slow, and I make spelling mistakes. Sometimes AI does not fully understand what I am trying to say.”

These variations demonstrate the concept of capital as described by Bourdieu, that capital is not evenly distributed, and it defines the opportunity in a field. Students who possess high digital capital do not just engage AI more frequently, but rather engage it more intensively, in more complex applications of debugging, refactoring, designing step-by-step reasoning prompts, and other forms of lower-capital

students use AI for simple definitions and simple explanations.

Part of the data manifesting in a specific type of digital expertise is prompting and verification as new types of digital cultural capital. Respondent 2 also strategically adjusts prompts (explain like I am 10, act like a strict CS professor) and compares AI outputs to other sources. In comparison, Respondent 1 did admit:

“Writing a good prompt is hard... when I type a short question, the answer is not what I want...I do not always know how to test it, especially for subjects I am weak in.”

Similarly, Respondent 6 recognised his limited ability to verify AI outputs:

“The hard part is knowing how to control the AI... and especially how to check if something is biased or incomplete.”

This is in line with the developing demands of AI literacy extending beyond tool access to encompass critical and verification of AI and reflective use (Delcker et al., 2024; Ouyang et al., 2022). Devoid of such competencies, students with less digital capital will be left as mere passive consumers of AI output, as opposed to active co-producers of knowledge.

Notably, these disparities coincide with the first-year preparedness gaps that are reported in the literature (McCarthy & Kuh, 2006; Mah & Ifenthaler, 2017). It is a way of alleviating under-preparedness in some students (Respondents 1,4, and 6) by making it comprehensible. However, the relative lack of digital skills also limits how much they can use AI to learn more intensively, which can even recreate or amplify social and educational differences (Tang, 2025). A fourth theme reflects the emotional ambivalence of AI use. The attitude of the students is not merely enthusiastic, nor is it completely opposed. Rather, their accounts mirror what the literature has started to record: perceived value of learning is mingled with anxiety, distrust, and fears of the loss of fundamental competencies (Hadinejad, 2024; Megbowon, 2025; Salguero, 2024).

Concerning the positive aspects, a lot of the respondents were linking AI to empowerment and inclusion. Respondent 1 referred to AI as the smart friend who can clarify, whereas Respondent 5 referred to it as a safe space:

I am very quiet in class... With AI, I can ask as many times as I want, in broken

English, and it still answers politely. That makes me feel supported.”

In the case of the students who are in vulnerable status in the university field, first-generation, rural, or those with non-elite schooling, AI therefore plays the symbolic role of equalising, increasing their feelings of belonging and ability (Beldean, 2024; Kapur et al., 2025).

Simultaneously, nearly all the respondents expressed the fear of dependency and cognitive weakening. Respondent 2 directly related the excessive use of AI to the loss of productive struggle:

“When you are tired after a long day... asking AI to ‘write the full function’ is just one step away. If I go down that road regularly, I know my own problem-solving muscles will weaken.”

Respondent 3 expressed concern that AI might undermine the deep reading central to literary study:

“If I rely too much on AI summaries, I fear I will lose that deep engagement... It can give a very polished but shallow analysis.”

These perceptions resonate with the concerns that Salguero (2024) expresses regarding the possibility of generative AI mediating against the ability to think critically and make evaluative judgments. They also represent the consciousness of the students that the quality of learning lies not just in what AI can generate, but in the position they will occupy vis-à-vis an artificial intelligence, as passive users or active decoders.

Another aspect of ambivalence is the aspect of guilt and secrecy. A number of students said that they felt that the use of AI is somehow wrong since they do not know how the rules are set by institutions. Respondent 5 stated:

“Do not tell my teachers exactly how much I use AI, because I am not sure if they will approve... That silence makes me feel like I am doing something slightly wrong even when I only use it for clarification.”

This echoes research which indicates a lack of ethical indeterminacy and policy lag in institutional response to GenAI (Driggers, 2025; Jobin et al., 2019). This ambiguity is converted into affective burdens of first-year students, who are simultaneously trying to establish themselves

in terms of their academic identity, and do the right thing.

Lastly, participants were sceptical and had a critical distance towards AI outputs, which reflects the current outcomes, that students tend to remain autonomous and critical in their judgements (Black & Tomlinson, 2025; Wambsganss et al., 2023). Respondent 2 noted: “I know it can hallucinate...I have seen it produce code that does not compile... That made me realise I have to treat it like a teammate, not a teacher.”

Those attitudes hint at the fact that the first-year students do not become passive consumers. Instead, their habitus encompasses the mixture of curiosity and caution, which influences the extent and manner in which AI is integrated into their studying activities.

**Institutional Silence, Hidden Use, and Demand for AI Literacy**

Another common cross-cutting theme was the sense of institutional silence or incomplete messaging concerning AI, which drives much of practices into the background and increases uncertainty. Although the literature indicates that faculty are bargaining their own positions and attempting to find the balance between experimentation and assessment integrity (Driggers, 2025), this is usually seen by students as inconsistent and perplexing.

Respondent 2 described this mixed landscape:

“Some teachers are okay with [AI] as a tutor; others warn us strongly. That mixed messaging makes me feel tense sometimes. I do not want to cross a line unintentionally.”

Similarly, Respondent 3 remarked:

“Our teachers have not openly discussed AI. Some hint that they know students use it, but they do not say clearly what is okay.”

The rules of the field are not fully communicated and are in flux according to Bourdieu. Consequently, students turn to peer networks, i.e., roommates, cousins, classmates at computer labs, to teach them how and when to apply AI. This is similar to the results of the literature on social capital and informal support systems in reports on the first-year transition (Tinto, 1994; Yorke & Longden, 2008), and provides concrete evidence of the necessity of a transparent, skill-building, ethically oriented guidance around GenAI (Kapur et al., 2025).

Most notably, every respondent, irrespective of their background, indicated a need for explicit interventions of AI literacy, such as:

- One-hour workshops on use of AI to understand without plagiarizing in the first year.
- Demonstrations: Discipline-specific demonstrations in which instructors demonstrate how to use AI critically (e.g., in CS, debugging or in sociology or literature, evaluating AI interpretations).
- Defined rules regarding AI recognition in all assignments.

**Respondent 4 suggested:**

“Teachers could also give small tasks where using AI is allowed and guided... That would teach us how to cross-check information.”

Respondent 6 emphasised the need for **inclusive** training:

“Many students from backgrounds like mine feel shy to admit that we are not comfortable with computers. A supportive workshop, maybe conducted in Urdu and English, would help us catch up.”

These appeals resonate with more recent models that promote the idea of affordable, adaptable AI competence building that incorporates the practice of practical skills, theory, and attitudes of reflection (Delcker et al., 2024; Vuorikari et al., 2022). They also suggest that first-year students are not requesting AI be eliminated but are seeking terms that would make it responsible, equitable and transparent.

Lastly, the respondents have not perceived AI as a dispassionate and contextually indifferent technology. In their turn, they took it according to their sociocultural and, on certain occasions, religious interpretations, siding with the sociocultural approaches that view AI as a mediating artefact within the larger discourses of automation and modernity (Beldean, 2024; Popenici Kerr, 2017).

A number of students localised AI output in specific ways by requesting Pakistani examples and evaluating foreign or non-matching situations with criticism. Respondent 4 recalled: “I typed, ‘Explain market segmentation with simple examples from Pakistan.’ It gave examples of clothing brands

targeting youth or middle-class families.

That made a lot more sense to me.”

Respondent 6 similarly used AI to connect Weberian bureaucracy to local institutions such as NADRA offices. This behaviour resonates with sociocultural views of AI as a “more expert other” whose utility depends on how learners situate its output within their own cultural repertoires (Black & Tomlinson, 2025).

Nonetheless, there are also participants who have noticed that AI is a certain body of knowledge and biases. Respondent 6 anticipated this issue:

“I know that AI is created mainly in Western contexts, so I worry that its answers may carry certain cultural biases... I think we need guidance that recognises both the benefits and the dangers of AI.”

This critical consciousness is in line with the new distinctions of human-like, context-aware, and mechanical, rule-driven AI (Dang Liu, 2022). It indicates the need to adopt critical AI literacy instead of the mere instrumental use.

Respondent 6, with a madrasa background to a sociology degree, has the ethical dimension also infringed by the motif of religious habitus. He also puts the usage of AI in the context of niyyat (intention), deception, and moral responsibility:

“AI can be a tool, but it must be used with niyyat and responsibility... If I submit work written by AI, it seems like a kind of deception, not only to the teacher but also to myself.”

This shows that the habitus of students, which is developed based on family, their previous education, and religious conditioning, significantly preconditions how they perceive and place AI in the context of their education. It supports Tang’s (2025) argument that sociological disparities in cultural, social, and technological competence lead to differentiated patterns of trust, use, and performance in GenAI contexts.

Taken together, the themes show that first-year Pakistani students are actively working to make sense of generative AI at the intersection of their backgrounds, attitudes, and institutional environments.

- In relation to RQ1 (lived experiences), students experience AI primarily as an informal tutor and translator that mediates access to disciplinary knowledge;

however, they also experience ethical uncertainty, hidden usage, and occasional mistrust.

- For RQ2 (attitudes and adoption), the data confirm that attitudes are multidimensional, combining empowerment with anxiety and guilt and that these orientations shape not just whether AI is used but for which tasks, at what depth, and with what degree of critical distance.
- Regarding RQ3 (digital competence), differences in devices, prior schooling, and digital skills operate as key forms of capital that structure who can transform AI into meaningful learning and who remains at the level of fragile, dependent, or shallow use.

Viewed through Bourdieu’s Theory of Practice, generative AI becomes part of the field of higher education, whose rules are currently unstable. Students bring divergent habitus and uneven capital to this field and, in the absence of clear institutional guidance, they improvise practices that seek to balance learning gains, moral integrity, and institutional risk. Some manage to mobilise AI in ways that expand their possibilities for understanding and independence; others are hindered by digital and linguistic barriers, limited verification skills, and fear of crossing invisible lines.

These findings reinforce and extend the literature by bringing a first-year, regionally grounded, sociological lens to GenAI use in higher education. They suggest that institutional responses cannot be limited to policy statements or bans but must include deliberate, inclusive AI literacy initiatives that recognise students’ diverse starting points and support the cultivation of responsible, critically engaged practices from the very beginning of their academic trajectories.

### Discussion & Findings

The results of this research demonstrate that as first-year university students in Pakistan, they use generative AI as a socially situated academic practice which is profoundly influenced by their habitus, their digital capital and the institutional field that they are trying to establish themselves. In line with the research question, the attitudes of the students and digital competencies were identified as defining the way in which they

experienced, adopted, and evaluated generative AI in their daily learning activities. In all six participants, AI was not simply presented as a technological tool but as a personal tutor and a language interpreter so that students could decipher the new unfamiliar disciplinary terms and academic in English. These experiences support previous studies that theorise AI as a mediating resource that serves to facilitate understanding and scaffold higher-order learning in cases of agency use (Black and Tomlinson, 2025). In case of students whose cultural or linguistic capital was weaker, especially those taught in Urdu-language schools or rural schools, AI offered a compensatory system, which temporarily replaced the cultural and academic fluency that is generally rewarded in the university discipline. In Bourdieusian terms, AI was an equaliser in the linguistic capital and such students could gain access to academic discourse communities that they would not have an opportunity to enter.

Together with this pedagogical value, the results indicate that first year students were able to put definite boundaries on ethical issues when it came to the authorship, originality and proper support. Students again and again differentiated between applying AI to get knowledge or to get an idea and to create something that needed to be reflected on by the individual, to be analyzed critically or to generate an original thought. This ethical bargaining will be familiar to the literature that talks of the emergent ethics of AI use among students (Kell, 2025) and disputes the ubiquitous thesis that first-year students are prone to misuse. However, participants proved to be intellectually independent as termed by Black and Tomlinson (2025) by denying AI help when it jeopardized fundamental learning or individual authenticity. Meanwhile, students expressed a serious concern regarding dependency, they feared that too much reliance on AI would undermine their disciplinary skills, like ability to read intensively or solve problems. So, attitudes were highly ambivalent as AI was empowering, risky and morally charged at the same time.

The research also discovered that digital capital, in terms of equipment, internet connectivity, digital literacy and triggered skills, was one of the key determinants of the intensity and advanced use of AI. Those students who had high digital capital (e.g. a major in CS who had high

experience with AI) could do more with generative AI in a critical and strategic way (e.g. debugging code, refining academic writing and comparing solutions paths more efficiently). In comparison, low-digital capital students were structurally disadvantaged: they had less access to laptops, could not type, and could not verify AI-generated results. Such differences are indicative of wider issues on unequal digital readiness amongst first year students (Ng et al., 2023) and argues in support of the argument by Tang (2025) that inequalities in technological, social and cultural capital directly affect AI performance and results. AI will only serve to support and not limit the already existing inequities in higher education without specific action.

One of the recurring themes among the participants was the institutional silence that was associated with the use of AI. Students outlined inconsistent or unclear communication by instructors on what AI uses were permissible and this lack of clarity led to covert usage, which led to feelings of guilt and turning to peer networks to seek advice. These circumstances indicate a transitional field: the institutional rules and norms of using AI are not well established and adopted. Students according to Bourdieusian terms were left to guess about the doxa, the unwritten laws in the field, and as a result may become confused or even afraid of making an unwanted mistake. This is in line with the current study that notes gaps in policy and ethical ambiguity regarding generative AI in higher education (Driggers, 2025). Meanwhile, everyone, irrespective of their background and competency, had a high wish to have formal, inclusive AI literacy training, such as workshops, demonstrations and explanations in a specific discipline, and explicit ethical standards. Such a plea supports current suggestions in favor of holistic AI literacy systems that would integrate applied competencies, judgmental critique, and reflective thinking (Delcker et al., 2024).

The results also indicate that students perceive AI not as a culturally contextual artefact but rather as a tool that is neutral, and its utility relied on their capacity to localise the outputs of AI to Pakistani circumstances. Local examples or contextualised interpretations were often asked by the participants, and the participants were knowledgeable of possible Western-

centric biases. Religious habitus also defined the moral orientation of students towards the use of AI in some instances and placed it in an ethical framework through such constructs as niyyat (intention) and personal integrity. These culturally informed reactions resonate with sociocultural attitudes and approaches that regard AI as a more knowledgeable other, the authority of which still has to be negotiated within other local norms and values (Popenici & Kerr, 2017; Beldean, 2024). This implies that AI literacy should be expanded beyond the technical aspect and should be encompassed with cultural, ethical and contextual sensibilities.

### Conclusion

The researchers indicate that Pakistani university students in the first year are using generative artificial intelligence in sophisticated, reflective manners as opposed to just cheating or blindly accepting its results. Their primary application of AI to achieve the goals of filling in language, existing knowledge and confidence and at the same time fear dependency, accuracy, and a degradation of personal thought. Inequality in digital capital and competence implies that there are students who are capable of making AI a strong learning companion. Conversely, other people are at a rudimentary or even dangerous level of usage all in a situation of ambiguous institutional rules and unseen and peer-driven practices.

Based on these findings, universities should prioritise structured, inclusive AI literacy programmes in the first year, focusing on practical skills (prompting, verification), ethics (authorship, acceptable help), and critical awareness (bias, cultural fit). Clear, discipline-specific policies and classroom demonstrations of responsible AI use are needed so students are not left to guess the rules or rely entirely on informal peer guidance. Special attention should be given to students from government schools, rural areas, and low-resource backgrounds by offering targeted support (workshops in Urdu/English, extra lab access), ensuring that generative AI narrows rather than widens existing inequalities in access, confidence, and academic success.

### REFERENCES

- Asad, M. M., & Aijaz, A. (2025). Influence of ChatGPT and generative AI on continuous learning and skill enhancement in Education 4.0: Contextual insights from the higher education of Pakistan. *The TQM Journal*.
- Atcheson, A., Khan, O., Siemann, B., Jain, A., & Karahalios, K. (2025, April). "I'd never actually realised how big an impact it had until now": Perspectives of university students with disabilities on generative artificial intelligence. In *Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems* (pp. 1-22).
- Bamasoud, D. M., Mohammad, R., & Bilal, S. (2025). Adopting generative AI in higher education: A dual-perspective study of students and lecturers in Saudi universities. *Big Data and Cognitive Computing*, 9(10), 264.
- Beldean, I. (2024). Perspectives of Bucharest students on automation in contemporary society amid the rise of new artificial intelligence technologies. *Journal of Comparative Research in Anthropology & Sociology*, 15(2).
- Caner-Yildirim, S. (2025). Modelling ChatGPT adoption among undergraduates: An integrated UTAUT2 and digital competence framework. *SAGE Open*, 15(2), 21582440251343340.
- Cengiz, S., & Peker, A. (2025). Generative artificial intelligence acceptance and artificial intelligence anxiety among university students: The sequential mediating role of attitudes toward artificial intelligence and literacy. *Current Psychology*, 44(9), 7991-8000.
- Černý, M. (2024). University students' conceptualisation of AI literacy: Theory and empirical evidence. *Social Sciences*, 13(3), 129.
- Chiu, T. K. (2025). From student artificial intelligence (AI) literacy to AI competency: Essential skills for the next generation. In *Navigating Generative AI in Higher Education* (pp. 194-210). Edward Elgar Publishing.

- Delcker, J., Heil, J., Ifenthaler, D., Seufert, S., & Spirgi, L. (2024). First-year students' AI-competence as a predictor for intended and de facto use of AI tools for supporting learning processes in higher education. *International Journal of Educational Technology in Higher Education*, 21(1), 18.
- Driggers, K. T. (2025). *The lived experiences and perspectives of higher education faculty regarding the use of artificial intelligence writing tools on students' coursework: A phenomenological study* (Doctoral dissertation).
- Hadinejad, N. (2024). *Ethical considerations of the digital age in higher education: An interview-based study of student experiences with ChatGPT as an example of generative AI*.
- Kapur, I., Sharkey, C. N., & Ren, C. (2025). Student perspectives on artificial intelligence: Challenges, opportunities, and societal implications. *Journal of Evidence-Based Social Work*, 1–27.
- Kell, C. (2025). *Faculty perspectives on generative AI in first-year writing: A grounded theory study* (Doctoral dissertation, University of Wyoming).
- Khalid, A. R., Ahmad, F., Ahmed, S., Naeem, M. A. B., Ain, N. U., Mehmood, H., ... Mahmood, S. (2025). Assessment of the attitude and fears of the physicians of Pakistan regarding artificial intelligence: A cross-sectional survey in 2024. *Discover Health Systems*, 4(1), 102.
- Korchak, A. E., Patarakin, Y. D., & Costley, J. (2025). Exploring the use of generative artificial intelligence by university students: A systematic literature review. *Vestnik Rossiiskogo Universiteta Druzhby Narodov. Seriya: Informatizatsiya Obrazovaniya*, 22(1), 37–57.
- Lin, X., Xu, G., & Xiong, B. (2025). Artificial intelligence literacy, sustainability of digital learning and practice achievement: A study of vocational college students. *PLOS ONE*, 20(10), e0332175.
- Majeed, M. K., & Ahmad, T. B. (2025). The role of ChatGPT and generative artificial intelligence in shaping the future of Islamic teachers' effectiveness in Southern Pakistan. *Jurnal Penelitian Agama*, 26(2), 153–177.
- Mashhood, A., Ahmed, A., Khan, I., Hashim, M., & Baloch, S. (2025). Use of generative AI for health among urban youth in Pakistan: A mixed-methods study. *medRxiv* (preprint).
- Megbowon, F. K. (2025). Generative AI in higher education: Perception and attitude of students from a university in South Africa. *Studies in Learning and Teaching*, 6(2), 542–555.
- Mehak, F., & Rizvi Jafree, S. (2025). Bridging the digital divide: Predictors of positive attitudes and functional use of AI among university students in Pakistan. *Social Sciences Spectrum*, 4(1), 617–632.
- Rosvoldsve, Å. (2024). *A sociocultural perspective on assessing writing in the age of generative AI: How does ChatGPT affect how upper secondary EAL teachers assess writing* (Master's thesis, NTNU).
- Salguero, M. (2024). *Perceived implications of generative artificial intelligence on human interaction and skill development in higher education*.
- Seo, H., Iqbal, A., & Rafique, S. (2024). Attitudes toward AI, AI self-efficacy, and AI adoption: A survey of media students in Afghanistan and Pakistan. *Studies in Media, Journalism, and Communications*, 2(2), 22–30.
- Shahzad, M. F., Xu, S., & Asif, M. (2025). Factors affecting generative artificial intelligence, such as ChatGPT, use in higher education: An application of the technology acceptance model. *British Educational Research Journal*, 51(2), 489–513.
- Tang, Y. (2025). AI for all? Exploring college student inequalities in generative artificial intelligence performance with Bourdieu's theory of practice. *Interactive Learning Environments*, 1–19.

Tsankov, N., & Damyanov, I. (2024). Attitudes of students–future teachers for the application of generative artificial intelligence. *Strategies for Policy in Science & Education*, 32(4).

Tsiani, M., Lefkos, I., & Fachantidis, N. (2025). Perceptions of generative AI in education: Insights from undergraduate and master 's-level future teachers. *Journal of Pedagogical Research*, 9(2), 89–108.

Zahra, S. M., Jameel, E., & Hussain, Z. (2025). The influence of generative AI on academic writing: A qualitative study of teachers' perspectives and digital literacy in Pakistan. *GUMAN*, 8(1), 148–172.

